IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: BORODY *et al.*	Art Unit	: 1616
Serial No.	: 10/506,728	Examiner	: Holt, Andriae M.
Filed	: June 27, 2005	Confirm. No.:	7029

Title : **ELECTROLYTE PURGATIVE**

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

ATTACHMENTS

1. DECLARATION of Dr. Thomas J. Borody Pursuant to 37 C.F.R. § 1.132
2. CLINICAL STUDY REPORT entitled "A Phase II, Comparative, Single-blinded, Randomised Study to Evaluate the Efficacy and Safety of Hypertonic Solution Combined with PicoPrep™ Capsules Compared to PicoPrep™ Capsules Alone, Standard Glycoprep™ and Standard PicoPrep™ as a Bowel Preparation" (30 June 2006)
3. Calculation of amount of sodium salt and sugar in the compositions of Kawakami.
4. The Merck Index, 9th ed. (1976), entry **8343**, page 1111.
5. Hoy *et al.*, Drugs 69(1): 123-136 (2009).

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DECLARATION PURSUANT TO 37 C.F.R. §1.132

Sir:

I, **Thomas J. Borody**, declare as follows,

1) I am an inventor of the above-captioned application, which is the National Stage of International Application. No. PCT/AU03/00257, filed March 4, 2003, which claims benefit of priority to Australian provisional patent application Serial No. PS 0887, filed March 4, 2002.

2) I am a Gastroenterologist. I obtained my BSc and MBBS from the University of New South Wales. I obtained my Ph.D. in medicine from the University of Newcastle and my M.D. from the University of New South Wales. I have been a Fellow of the Royal Australasian College of Physicians since 1982. I have been a Fellow of the American College of Gastroenterology since 1993 and a Fellow of the American College of Physicians (Philadelphia, PA) since 2002. I was a Clinical Fellow in Gastroenterology at the Mayo Clinic in Rochester, Minnesota. I am the Founder and have been the Medical Director for the Centre for Digestive Diseases in New South Wales since 1985 and have been a Consulting Gastroenterologist to the Sydney Adventist Hospital since 1995.

3) I have published more than 120 scientific articles. I am a reviewer for the Medical Journal of Australia, the American Journal of Gastroenterology, Digestive Diseases and Sciences and the Journal of Gastroenterology and Hepatology. I am an inventor on 18 issued US patents.

4) I have reviewed the Office Action, mailed February 26, 2009, in connection with the above-captioned application.

5) The above-captioned application provides compositions that can be used for orthostatic lavage to clean the bowel of fecal matter, as a simple purgative or in electrolyte replacement therapy. The pending claims recite compositions for use in a purgative and methods of inducing purgation of the colon of a patient.

6) The Office Action cites the combination of Kawakami (JP 05306221) and Colliopoulos (U.S. Pat. No. 5,232,699) and Cockerill (U.S. Pat. No. 4,452,779) in the rejection of certain of the claims. Kawakami describes isotonic purgative preparations for irrigation of the intestines. Colliopoulos describes laxatives containing psyllium and sennoside, such as in the form of a baked wafer. Laxative compositions containing senna or sennosides are known to have undesirable side effects, such as pain, bloating and cramping. Cockerill describes diuretic compositions and methods for removing excess fluid from mammary tissue of a lactating mammal in order to improve the quality and quantity of milk from the mammary tissue without dehydrating the mammal. There is no mention in Cockerill that its composition could be used as a purgative to cleanse the colon. The compositions are in the form of a powder that is dispersed on dry feed.

7) The composition of the instant claims can be used in a purgative, such as a hypertonic purgative. As described in the specification, a purgative including the instant composition is more effective as a bowel cleansing preparation than existing purgative agents. The various salts and the xylose or other minimally degradable sugar in the instant compositions are used to increase the tonicity of the active solution. When prepared as a hypertonic solution, a reduced volume of the active agent can be consumed, resulting in better tolerability and reduction in adverse side effects, thereby improving patient compliance. The addition of short chain minimally degradable carbohydrates in the instant composition avoids the gas formation, bloating and cramps that can be caused by degradable sugars used in commercial products. The salts reduce the electrolyte loss during bowel purgation. In the instant compositions, palatable salts such as gluconate, citrate and aspartate are used to improve palatability since these salts are known to locally reduce stimulation of salt receptors found on the tongue.

8) A clinical study, entitled "A Phase II, Comparative, Single-blinded, Randomised Study to Evaluate the Efficacy and Safety of Hypertonic Solution Combined with PicoPrep™ Capsules Compared with PicoPrep™ Capsules Alone, Standard Glycoprep™ and Standard PicoPrep™ as Bowel Preparation," was undertaken to compare a hypertonic solution including the composition claimed in the instant application to commercially available bowel cleansers, such as Glycoprep™ and PicoPrep™.

9) Glycoprep™ is a PEG-based purgative containing PEG 3350, sodium chloride, potassium chloride, sodium sulfate, ascorbic acid, aspartame and citric acid and is isotonic with respect to bowel content. Generally 3 liters of Glycoprep™ are administered.

10) PicoPrep™ is a magnesium citrate-based purgative. PicoPrep™ includes sodium picosulfate (a stimulant laxative), magnesium oxide, citric acid and aspartame. When dissolved in water, the magnesium oxide and citric acid components form magnesium citrate, an osmotic purgative. PicoPrep™ generally is administered as a 250 mL aqueous solution, followed by the administration of several glasses of water over the course of several hours.

11) The composition of Kawakami is an isotonic magnesium citrate solution that includes sodium chloride, potassium hydroxide and a degradable sugar such as sucrose. Thus, the composition of Kawakami is a magnesium citrate-based purgative similar in composition to PicoPrep™. It differs from PicoPrep™ in that it includes an easily digestible sugar and does not include sodium picosulfate. PicoPrep™ also is a more hypertonic solution. The composition of Kawakami is administered as a 900 mL aqueous solution.

12) The results of the clinical study are shown in the attached "Clinical Study Report." As can be seen from the results of the clinical study, purgatives that include the composition claimed in the instant application were found to be more effective at cleansing the bowel than standard magnesium citrate-based purgatives like PicoPrep™ preparations or PEG-based purgatives such as Glycoprep™ alone. In particular, purgatives that include the composition claimed in the instant application were rated significantly more effective in cleansing the transverse colon than standard magnesium citrate-based purgatives like PicoPrep™ preparations.

13) Because the composition described in Kawakami is a magnesium citrate-based purgative similar to PicoPrep™, and formulations that include the composition claimed in the instant application were found to be more effective at cleansing the bowel than a magnesium citrate-based purgative like PicoPrep™, it is expected that formulations that include the composition claimed in the instant application also would be more effective at cleansing the bowel than the magnesium citrate-based purgative described in Kawakami.

14) I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent resulting therefrom.

11/06/2009
Date

Thomas J. Borody, M.D., Ph.D.

"A Phase II, Comparative, Single-blinded, Randomised Study to Evaluate the Efficacy and Safety of Hypertonic Solution Combined with PicoPrep™ Capsules Compared with PicoPrep™ Capsules Alone, Standard Glycoprep™ and Standard PicoPrep™ as a Bowel Preparation."

Study No.: CDD02/C01

Clinical Study Report

Version 1 (30 June, 2006)

Investigational Product:	Hypertonic solution and PicoPrep™ capsules
Indication Studied:	Bowel preparation prior to colonoscopy
Design:	Single blind, Randomised, Comparative
Study Initiation Date:	9th April 2003
Study Completion Date:	5th May 2004
Sponsor:	Centre for Digestive Diseases 144 Great North Road Five Dock, NSW Australia, 2046
Investigator Site:	Centre for Digestive Diseases 144 Great North Road Five Dock, NSW Australia, 2046
Principal Investigator:	Prof Thomas Borody
Co-Investigators:	Dr Antony Wettstein Dr Sanjay Ramrakha Dr John Saxon
Study Manager:	Ms Rosa Surace
Study Co-ordinator:	Ms Raquel Llorente

Archiving: The Centre for Digestive Diseases is responsible for the archiving of all essential study documentation for the total of 15 years from the date of completion above.

Note: This study was performed in compliance with Good Clinical Practices (GCP) TGA July 2002.

SIGNATURE / APPROVAL PAGE

Study Title: "A Phase II, Comparative, Single-blinded, Randomised Study to Evaluate the Efficacy and Safety of Hypertonic Solution Combined With PicoPrep™ Capsules Compared With PicoPrep™ Capsules alone, Standard Glycoprep™, and Standard PicoPrep™ as a Bowel Preparation."

Study Author(s): Prof Thomas Borody (Principal Investigator), Raquel Llorente (Study Co-ordinator) and Rosa Surace (Study Manager) from the Centre for Digestive Diseases Pty Ltd.

I have read this report and confirm that to the best of my knowledge it accurately describes the conduct and results of the study.

Investigator: _____ **Signature:** _____

Affiliation: Study Site and Australian Sponsor

Date: _____

SYNOPSIS

Name of Sponsor: Centre for Digestive Diseases	**Name of Finished Product:** Hypertonic Solution	**Name of Active Ingredients:** Sodium Picosulfate, Xylose, Magnesium Sulfate, Sodium Chloride, Sodium Citrate, Potassium Glutonate, Chicken Flavouring
Title of Study: "A phase II, comparative, single-blinded, randomised study to evaluate the efficacy and safety of Hypertonic solution combined with PicoPrep™ capsules compared with PicoPrep™ capsules alone, standard Glycoprep™, and standard PicoPrep™ as a bowel preparation."		
Investigators: Principal Investigator: Prof Thomas Borody Co-Investigators: Dr Antony Wettstein, Dr Sanjay Ramrakha, Dr John Saxon		
Study Centre: Centre for Digestive Diseases, 144 Great North Road, Five Dock, NSW, 2046, AUSTRALIA		
Study Period: 2nd quarter 2003 to 2nd quarter 2003	**Phase of Development:** Phase II, therapeutic exploratory	
Objectives: *Primary Objective* - To evaluate the efficacy and safety of Hypertonic solution combined with PicoPrep™ capsules compared with PicoPrep™ capsules alone, standard Glycoprep™, and standard PicoPrep™ as a bowel preparation. *Secondary Objective* - To assess the side effects and compliance of the Hypertonic solution combined with PicoPrep™ capsules compared with PicoPrep™ capsules alone, and those of standard Glycoprep™, and standard PicoPrep™.		
Methodology: A comparative study which compared the efficacy and safety of a new bowel preparation with currently marketed bowel preparations. Patient ratings were used to assess differences in tolerance and compliance. Doctor and Sedationist ratings were used to determine differences in efficacy between the bowel preparations. Adverse events were assessed to determine safety of bowel preparations.		
Number of Subjects (planned and analysed): It was planned that 60 subjects were to fully complete the study (15 per arm). Sixty two subjects enrolled, with 59 subjects completing the study as per protocol. Due to subject withdrawals and randomisation the subject disposition was 15 subjects in Arm 1, 16 subjects in Arm 2, and 14 subjects in each of Arms 3 and 4.		
Diagnosis and Main Criteria for Inclusion: Male and female subjects aged 18 to 70 years undergoing colonoscopy and with no other major concomitant illness that may interfere with subject's ability to enter the trial.		
Test Product, Dose, Mode of Administration and Batch Number: Hypertonic solution and PicoPrep™ capsules. 25.015g Hypertonic solution in 350ml water plus 10 PicoPrep™ capsules at 3pm. 10 PicoPrep™ capsules at 6pm. Taken orally. Hypertonic solution batch no.: C0804. PicoPrep™ capsule batch no.: B0136N B11181.		
Duration of Treatment: 1 day	**Concomitant Medication Specified in Protocol:** Diuretics, Indapamine, Carbamazepine, Lithium Carbonate, SSRIs and ACE inhibitors.	
Criteria for Evaluation: *Efficacy data included* – Patient, Doctor and Sedationist evaluation forms. *Safety data included* – urinalysis, physical examinations, blood tests and vital signs.		
Statistical Methods: Fisher's test was used due to small sample size (n=62) with an expected number of subjects in each cell of 15 to look for significant difference between the proportions (the number of subjects actually benefited from each treatment). For example, if the proportions are close together the power is small or large if the proportions are far apart. Wilcoxon signed rank test is used for paired groups which are randomly selected from the population. The Mann-Whitney non-parametric test was used to compare two mean scores. A p value of less than 0.05 is considered significant.		
Summary – Conclusions *Efficacy Results:* Hypertonic solution combined with PicoPrep™ capsules and standard PicoPrep™ are more effective than standard Glycoprep™, and PicoPrep™ capsules alone in cleansing the bowel. Subjects prefer PicoPrep™ capsules alone as a bowel cleansing preparation. *Safety Results:* There is minimal risk in the use of Hypertonic solution combined with PicoPrep™ capsules as a preparation for colonoscopy when compared to the other preparations. No SAE's were reported. Several AE's were reported, the most common of which were headaches. *Conclusions:* Hypertonic solution combined with PicoPrep™ capsules is an effective bowel preparation, as rated by doctors and sedationists. The combination is not as well tolerated by subjects as PicoPrep™ capsules alone. Further studies are recommended with larger subject populations.		

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1. ABBREVIATIONS AND DEFINITIONS

AE	Adverse Event
Ca	calcium
CDD	Centre for Digestive Diseases
CI	Confidence Interval
CRF	Case Report Form
CTN	Clinical Trials Notification (Scheme)
FBC	Full Blood Count
GCP	Good Clinical Practice
GI	Gastrointestinal
GS	Standard Glycoprep™ sachet
HREC	Human Research Ethics Committee
HYPC	Hypertonic solution with PicoPrep™ capsules
ICH	International Conference on Harmonisation
MBA-20	Full Biochemistry
Mg	Magnesium
MgO	Magnesium oxide
Na	Sodium
NaCl	Sodium Chloride
NHMRC	National Health and Medical Research Council
PCA	PicoPrep™ capsules alone
PEG	Polyethylene glycol
PS	Standard PicoPrep™ sachets
Q1	First Quarter
Q2	Second Quarter
Q3	Third Quarter
Q4	Fourth Quarter
SAE	Serious Adverse Event
SIADH	Syndrome of inappropriate secretion of anti-diuretic hormone
SSRI	Selective Serotonin Re-uptake Inhibitor
SD	Standard Deviation
TGA	Therapeutic Goods Administration

2. ETHICS

2.1 Human Research Ethics Committee (HREC)

Prior to study commencement, the study protocol, patient information and consent document, and any other appropriate documents were submitted to the Centre for Digestive Diseases Human Research Ethics Committee (CDD HREC) Section 12.2.1, with a cover letter listing the documents submitted, their dates of issue, and the site for which approval was sought.

Approval was granted on 22nd March 2004. The CDD HREC was constituted in accordance with the *National Statement on Ethical Conduct in Research involving Humans* (June 1999) as issued by the National Health and Medical Research Council (NHMRC), in accordance with the NHMRC Act, 1992 (Cth) and ICH Good Clinical Practice (GCP) guidelines (July 2002), at the time of approval.

2.2 Ethical Conduct of the Study

The procedures set out in the study protocol, pertaining to the conduct, evaluation, and documentation of this study, were designed to ensure that the Sponsor and Investigator abide by the principles of the Good Clinical Practice (GCP) guidelines of the ICH and the ethical principles detailed in the current revision of the Declaration of Helsinki (2002). The study was also carried out in keeping with local legal and regulatory requirements.

2.3 Patient Information and Consent

Before being admitted to the clinical study, informed consent was obtained after the nature, scope, and possible consequences of the trial had been explained in a form understandable to the participant.

A Patient Information and Consent document that included study information and participation outline as well as the consent form was prepared. This document complied with all local site and regulatory requirements. The document was written in a language understandable to the subject in layman's terms. The consent form specified who informed the subject. The person who informed the subject and answered queries was either the Investigator or a Research Assistant.

The subject was given the Patient Information and Consent Form, Section 12.2.3(within appendix of this document), to read. After reviewing the informed consent document and having queries answered, subjects willing to participate were obliged to give consent in writing. The subject's consent was confirmed at this time by the signature of the subject and the person conducting the informed consent discussions. Subjects were consented post pre-screening and before baseline assessments.

3. INVESTIGATORS AND STUDY ADMINISTRATIVE STRUCTURE

Investigators	Dr Thomas Borody (Principal Investigator)* Dr Antony Wettstein (Co-investigator)~ Dr Sanjay Ramrakha (Co-investigator)# Dr John Saxon (Co-investigator)^ *~#^Responsible for final protocol version and determination of assessment criteria. Completion of efficacy assessments. *~ Informed consent, eligibility, baseline assessments.
Study Manager	Rosa Surace: responsible for overall management of study and monitoring.
Study Co-ordinator	Raquel Llorente: responsible for HREC submission of study documents, preparation of source documents, CRF preparation, IP randomisation and packaging, pre-screening and subject recruitment, consent, subject management, coordination of study visits, subject notes, CRF entry and collation of results.

Please refer to Section 12.2.2 for the curriculum vitae of all study staff.

4. INTRODUCTION

The use of colonoscopic surveillance has increased significantly in recent times as an effective method for detecting colonic polyps and bowel cancer. The effectiveness of this screening relies on an adequately prepared bowel.

Preparation of the bowel has been the most poorly tolerated aspect of colonoscopic procedures. Among the problems encountered are the dietary restrictions of a low residue diet, the period of fasting on the day of the procedure for anaesthetic reasons and, most significantly, the effects of purgative solutions administered on the day prior.

The problems encountered in the bowel preparation phase are due firstly to administration of the preparation itself. Effective bowel preparations as a general rule have poor palatability and frequently result in side effects such as nausea, vomiting, abdominal pain and bloating. Thus palatability and side effects are major factors in the subject's acceptance of the preparation.

Problems in the bowel preparation phase also result from the physiological disturbance of fluid and electrolyte shift, which stem from the purgative effect. Side effects can occur as a result of clinically significant hyponatremia and include confusion, headaches, seizures and comas. Thus physicians are not only concerned with the adequacy of the preparation in cleaning the colon but also with the maintenance of physiological and biochemical parameters.

Effective bowel preparations have yet to achieve acceptance by both parties involved (gastroenterologist and patient).

The initial use of phosphate enemas was associated with significant electrolyte and volume shifts. The introduction of isotonic solutions containing polyethylene glycol (PEG) resulted in safer bowel preparation than phosphate enemas, as these solutions generally result in lower electrolyte shifts. However, isotonic solutions still have significant compliance problems because of poor palatability and the large volume required to achieve adequate bowel preparation.
An alternative to poorly tolerated volumes of solution such as Fleet, PicoPrep™, Picolax and Glycoprep™, has recently been the substitution of encapsulated active ingredients[1]. These capsules have been shown to improve palatability[2].

Another alternative is the use of a hypertonic salt solution, which has been developed to complement the use of existing purgative agents and allows for a reduced volume of the active agent. A reduction in the quantity of any active agent would result in better tolerability and side-effect profile. The addition of the hypertonic salt solution with its dual action can help achieve these objectives without sacrificing quality of the bowel preparation.

The addition of short chain sugar or carbohydrate moieties in the hypertonic salt solution avoids gas formation, bloating and cramps. The various salts as well as the sugar Xylose are used to increase the tonicity of the active solution. The addition of salts also aims to reduce the electrolyte loss during the bowel purgation. However, palatability has been a recurring problem since bowel preparations either taste too salty or are given in too large a volume for easy digestion. This is reduced by using palatable salts such gluconate, citrate and aspartate, which are known to locally reduce stimulation of salt receptors found on the tongue. Additionally adding flavouring that is complementary to salty dishes may improve palatability.

5. STUDY OBJECTIVES

The aim of this prospective, randomised, single-blinded, comparative study was to assess the efficacy and safety of Hypertonic solution combined with PicoPrep™ capsules (HYPC) as a bowel preparation compared to standard Glycoprep™ (GS), standard PicoPrep™ (PS) and PicoPrep™ capsules alone (PCA). The primary objective was to test the hypothesis that Hypertonic solution combined with PicoPrep™ capsules would be as effective and safe as PicoPrep™ capsules alone, standard PicoPrep™ and standard Glycoprep™ as a bowel preparation. The secondary objective was to assess side effects, patient compliance and tolerance, with the hypothesis that Hypertonic solution combined with PicoPrep™ capsules would be greater tolerated than the other bowel preparations due to lower levels of the active ingredient.

6. INVESTIGATIONAL PLAN

6.1 Overall Study Design and Plan-Description

Design: Randomised, single-blinded, comparative.

Population: The patient population to fully complete the study was to comprise of 60 patients booked to undergo colonoscopic investigation.

Dietary Restriction: All subjects were to refrain from eating solid food on the day prior to colonoscopy and to drink at least one glass of water every hour during and following the bowel preparation, as per standard clinical practice.

Please refer to Section 12.2.3 for study protocol and Section 12.2.4 for sample CRF.

6.2 Discussion of Study Design

No control group was used in this study. This was a comparative study comparing different arms to determine efficacy, safety and tolerance of various bowel preparations. Examinations included urinalysis, blood tests, physical examinations and vital signs as well as Patient, Doctor and Sedationist Evaluation Forms to determine the efficacy, safety and tolerance of the bowel preparations. Throughout the trial, doctors and sedationists were blinded to the preparations study subjects had taken prior to their procedure. It was not possible to blind subject and study co-ordinator from preparations due to the significant differences in dispensation form and instructions for intake.

6.3 Selection of Study Population

6.3.1 Inclusion Criteria

The population base consisted of patients attending the Centre for Digestive Diseases who were scheduled to undergo a colonoscopy. Patients deemed eligible to enter the trial were contacted by telephone up to 14 days before their scheduled procedure and invited to participate. Interested patients were invited to attend the Centre before their scheduled procedure date for study screening purposes. A total of 59 subjects fully completed were to be recruited.

All eligible subjects who were willing to participate in the study were given the opportunity to ask questions, and were thoroughly informed about the study before signing consent.

Subjects who failed to meet the inclusion/exclusion criteria were informed that they were not eligible for the study and would continue under the care of the Investigator as per standard clinical practice. Those who were successfully recruited were given the bowel preparation they were to take once baseline examinations were conducted and eligibility confirmed. All patients who were screened for eligibility were documented regardless of successful recruitment or otherwise.

Patients were required to meet all of the following criteria to be eligible for inclusion in the trial:

1. Males and females aged 18 to 70 years, inclusive.
2. No clinical evidence of any other serious disease (e.g. diabetics) as assessed by the Investigator, which might interfere with the patient's ability to enter the trial.
3. Females must not be pregnant or lactating.
4. Able to communicate well with the Investigators and to comply with the requirements of the entire study. If unable to communicate well with Investigators, translated information sheets / consent forms may be used with a qualified accredited interpreter.
5. Provision of written informed consent to participate.

6.3.2 Exclusion Criteria

Approx. half the exclusion criteria (criteria 1, 3, 7, 8, 11, 13, and 15 to 18) are standard CDD safety exclusion criteria to reduce risks associated with the study and its procedures. Criteria 2, 4 to 6, 12, and 14 were exclusions based on known disorders that may have been exacerbated by the intake of the investigational product. Exclusion criteria 9 and 10 addressed the use of concomitant medications which may have interacted with the investigational product to produce adverse effects.

Patients were excluded for any of the following reasons:

1. Elderly patients with diminished sense of thirst, especially when physical infirmity limits independent access to food and drink.
2. Evidence of pulmonary disease or disorders of the CNS associated with SIADH.
3. Evidence of poor dietary intake / malnutrition as assessed by the investigator.
4. Clinical evidence of hypothyroidism or adrenal insufficiency associated with hypo-osmolar hyponatremia.
5. Known psychiatric patients subject to psychogenic polydipsia.
6. Clinical history of hepatic cirrhosis or congestive heart failure.
7. Clinically relevant abnormalities in physical examination or laboratory screening.
8. Any evidence of significant haematological, hepatic, renal, cardiac, pulmonary, metabolic, neurologic or psychiatric disease.
9. Concurrent medications such as diuretics, indapamide, lithium carbonate, ACE inhibitors, selective serotonin re-uptake inhibitors. Please refer to Section 6.4.4.1 for a complete list of prohibited medications.
10. Concomitant administration of carbamazepine or SSRI both of which can on occasions cause asymptomatic hyponatremia, unless the patient is adequately monitored for these medications.
11. Known acute or chronic renal impairment as assessed by Investigator.
12. Known reaction or sensitivity to monosodium glutamate.
13. Serious adverse reaction or hypersensitivity to any related drug.
14. Asthmatics.
15. Inability to communicate or cooperate effectively with the Investigator or appropriate interpreter.
16. Any contraindication to the colonoscopy procedure.
17. Recent history or current drug or alcohol abuse.
18. Participation in any other clinical trial within the past 30 days.

The exclusion criteria did not greatly inhibit recruitment as the majority of screened patients met the inclusion criteria.

6.3.3 Removal of Subjects from Therapy or Assessment

No subjects were withdrawn due to poor compliance or serious adverse events. One subject was removed from the study and classified as a delayed exclusion upon the return of a positive pregnancy test. Another subject was withdrawn due to anxiety associated with undergoing a colonoscopy. One subject did not complete all study procedures as per protocol due to an adverse event, non-completion of the investigational product and non-assessment by the Doctor and Sedationist. However for the purpose of this study, the subject was included in the Patient

Evaluation and safety analyses. Subjects who were withdrawn were not included in the efficacy assessments.

6.4 Treatments

6.4.1 Treatment Administered

This was a randomised, comparative, single-blinded study. Bowel preparations were administered per arm, with each arm receiving one bowel preparation. The preparations and their doses were as follows:

Tables A: Preparation Administration Schedule

A.1: Arm 1 – Hypertonic Solution with PicoPrep™ capsules

Time	Hypertonic Solution	PicoPrep™ Capsules	Water
3 pm	25.015 grams dissolved in 350 ml water	10 capsules	6 glasses
6 pm	0	10 capsules	5 - 6 glasses

A.2: Arm 2 – PicoPrep™ capsules alone

Time	PicoPrep™ Capsules	Water
3 pm	15 capsules	6 glasses
9 pm	15 capsules	6 glasses

A.3: Arm 3 – Standard PicoPrep™ sachets

Time	PicoPrep™	Water
3 pm	1 sachet	6 glasses
9 pm	1 sachet	6 glasses

A.4: Arm 3 – Standard Glycoprep™ sachets

Time	Glycoprep	Water
1pm	1 sachet	12 glasses

Subjects in the standard PicoPrep™ and Glycoprep™ arms followed the standard directions outlined on the packaging for each product.

6.4.2 Identity of Investigational Product

The Hypertonic solution used in this trial contained the following:

Table B.1: Hypertonic Solution Ingredients

mg/dose	Ingredient
15.00	Sodium Picosulphate
10 000.00	Xylose
5 000.00	Magnesium Sulphate (epsom salts)
3 000.00	Sodium Chloride
2 000.00	Sodium Citrate
2 000.00	Potassium Gluconate
3 000.00	Maggi Chicken Flavour

Table B.2: PicoPrep™ Capsule Ingredients

g/dose	Ingredient
10.00	Sodium Picosulphate
3.50	Magnesium Oxide
12.00	Citric Acid

The PicoPrep™ Capsules were made up from the same powdered ingredients used in Standard PicoPrep™sachets.

All subjects in Arm 1 received HYPC (this study used batch numbers B0136N, B11181 and C0804). Refer to Section 12.1.7 for a complete breakdown of medication dispensed. No subject received expired bowel preparation at any time during the study.

6.4.3 Selection of Doses in the Efficacy Data

Doses for the bowel preparation were selected and based on standard clinical practice and the optimum minimum dose of active ingredients to successfully empty the bowel without compromising the safety of the subject. Dosages were also based on the dosages available on the market.

6.4.4 Prior and Concomitant Therapy

Additional illnesses present at the time of informed consent was obtained were regarded as concomitant illnesses and were documented on the appropriate pages of the case report form (CRF).

6.4.4.1 Prohibited Medications

The medications prohibited or deemed to interfere with the efficacy of this treatment included diuretics, indapamide, lithium carbonate, carbamazepine, ACE inhibitors and selective serotonin re-uptake inhibitors (SSRIs). Other prohibited medications not classed in the above categories

included amiodarone, chlorpropamine, clofibrate, cyclophosphamide, tolbutamide, thiazides, oxytocin, desmopressin and vincristine.

6.4.4.2 Concomitant Medication

All other concomitant medication for other medical conditions used during the study were recorded in the CRF. This included changes of dose/regimens and/or new treatments. Indication for use was also recorded.

6.4.4.3 Dietary Restrictions

Subjects were asked not to consume any solid food and to drink only clear fluids on the day prior to colonoscopy, as per standard clinical practice. They were required to drink at least one glass of water every hour during and following the bowel preparation.

6.4.5 Treatment Compliance

All bowel preparations were dispensed according to the arm to which each subject was randomised. Bowel preparation was dispensed at Visit 1, and was to be taken prior to colonoscopy, following the instructions given. All bowel preparations were labelled with a batch number and expiry date.

Subjects were instructed to return their bowel preparation packaging at Visit 2 (the day of their colonoscopy). Compliance was assessed by the Patient Evaluation form that each participant was required to complete prior to their procedure and confirmed with the return of empty bowel preparation packaging. Details were recorded in the CRF.

6.5 Efficacy and Safety Variables

6.5.1 Efficacy and Safety Measurements Assessed

Table C: List of Efficacy and Safety Measurements

EFFICACY	SAFETY
Doctor Evaluation Form	Physical examination (including vital signs)
Sedationist Evaluation Form	Laboratory studies (blood test and urinalysis)
Patient Evaluation Form	Adverse events

The efficacy of the bowel preparations cleansing was measured in all Arms via Doctor and Sedationist Evaluation forms. At each subject's procedure, the Doctor and Sedationist were required to record the overall effectiveness of the bowel preparation used by the subject, on a five-point rating scale ranging from "inadequate" to "excellent". Efficacy of the bowel preparation in cleansing the rectum, terminal ileum, caecum and transverse colon, was also rated by each subject's Doctor and Sedationist, using a rating scale of 1 to 10 (1 = not effective and 10 = highly effective).

Subject compliance and tolerance of the bowel preparation was assessed via subjects' recorded responses on the Patient Evaluation form. The Patient Evaluation form assessed subjects' opinions of the taste of the bowel preparation, ease of completion, ability to complete the preparation, willingness to use the preparation in the future, and perceived efficacy of the preparation.

Safety assessments included physical examinations, laboratory studies (blood tests and urinalysis), vital signs and adverse events. A physical examination was performed and vital

signs assessed for all subjects at Visit 1. At Visit 2, a blood sample and urine sample was collected and vital signs were measured.

Section 9.1 outlines the adverse events recorded over the period of the study. Section 12.1.6 contains a complete list of all adverse events broken down per subject. There were no serious adverse events reported in the duration of the study.

Laboratory results are discussed in Section 9.2, and Section 12.1.8 contains all laboratory results. No deviations from the normal range were deemed clinically significant. One subject was found to be pregnant upon the return of her Visit 1 laboratory results and was excluded from the study.

6.5.2 Appropriateness of Measurements

The Patient Evaluation Form, completed by subjects after taking the bowel preparation and before their colonoscopy, measured the following aspects of the bowel preparations: ease of completion, taste of the preparation, ability to complete the preparation, willingness to use the preparation in the future, and perceived efficacy of the preparation. The evaluation of these aspects of the bowel preparation by subjects is considered a standard efficacy measurement for the evaluation of the tolerability of bowel preparations. Although subject perception of efficacy clearly is of little use, refer to Figure 7, Section 8.4.1.

Both the Doctor Evaluation Form and the Sedation Evaluation Form, completed by doctors and sedationists during colonoscopy to rate the adequacy of the bowel cleansing from 'excellent' to 'poor', are considered standard measurements for evaluating the efficacy of the bowel preparation taken by subjects. However, the 10 point scale of measure introduced too many variables to be of significant statistical value. In addition, Sedationists were included in the efficacy assessments as a means of verifying the Doctor Evaluation. However, in the analysis of efficacy this second set of data reduced the statistical power of the analysis due the varied ratings given by each assessor.

Recording adverse events and the measurement of laboratory values (blood tests and urinalyses) at baseline and after the completion of the bowel preparation are measurements that are commonly used to monitor subject safety when evaluating different bowel preparations.

6.5.3 Data Quality Assurance

Data quality assurance methods implemented for this study include:

1) Investigator meeting prior to study commencement,
2) Data verification through the use of source documentation,
3) Use of a single laboratory for all standard laboratory testing, and
4) Monitoring of site files by Study Manager.

6.6 Statistical Methods Planned in the Protocol and Determination of Sample Size

6.6.1 Statistical and Analytical Plans

A total of 62 subjects were screened for study eligibility. Of these 62 subjects were found eligible for study participation and were enrolled into the study. Due to a delayed exclusion, and two withdrawals a total of 59 subjects completed the study. The number of subjects was randomly assigned to each Arm was intended to be 15 per group, however the final numbers differed. The data were analysed for significant difference between preparations using various statistical tests shown in Table D.

Table D: List of Statistical Analyses:

	Statistical Test
Doctor Evaluation (overall adequacy of bowel cleansing)	Differences in Doctor evaluations between arms were analysed using Fisher's exact Test.
Sedationist Evaluation (overall adequacy of bowel cleansing)	Differences in Sedationist evaluations between arms were analysed using Fisher's exact Test.
Adequacy of Cleansing in Rectum	Differences in Doctor and Sedation evaluations of specific bowel areas between arms were analysed using Mann-Whitney test.
Adequacy of Cleansing in Transverse Colon	Differences in Doctor and Sedation evaluations of specific bowel areas between arms were analysed using Mann-Whitney tests.
Adequacy of Cleansing in Terminal Ileum	Differences in Doctor and Sedation evaluations of specific bowel areas between arms were analysed using Mann-Whitney test.
Adequacy of Cleansing in Caecum	Differences in Doctor and Sedation evaluations of specific bowel areas between arms were analysed using Mann-Whitney test.
Patient Evaluation	Differences in Patient evaluations between arms were analysed using Fisher's exact Test.
Laboratory Values	Differences between Visit 1 and Visit 2 laboratory values (blood tests and urinalysis) were analysed using the Wilcoxon matched pairs signed rank test.
Adverse Events	Differences in adverse events type and severity between arms were analysed using Fisher's exact test.

6.6.2 Determination of Sample Size

This was a comparative study with a small sample size in order to determine the smallest difference that would be clinically (or scientifically) important for future studies using an appropriate sample size.

6.7 Changes in Conduct of the Study or Planned Analyses

An initial sample size of 60 fully completed subjects was expected, with 15 subjects per Arm. However, only 59 subjects completed the study. This was due to two withdrawals, one of which was not replaced. Not all Arms contained 15 subjects: Arm 1 (HYPC) had 15 subjects, Arm 2 (PCA) had 16 subjects, Arm 3 (PS) had 14 subjects and Arm 4 (GS) had 14 subjects. As this was a comparative study, the sample was not intended to be a statistically significant sample size.

Once the study had been completed and the data correlated, basic statistical analyses were performed. Statistical significance was examined in the following data sets:

1. Differences in doctors' ratings of the overall efficacy of the four bowel preparations and differences in efficacy of the four bowel preparations in the rectum, transverse colon, caecum and terminal ileum (Section 8.4.1).

2. Differences in sedationists' ratings of the overall efficacy of the four bowel preparations and differences in efficacy of the four bowel preparations in the rectum, transverse colon, caecum and terminal ileum (Section 8.4.1).

3. Differences in ratings on ease of completion, taste of preparation, ability to complete preparation, willingness to use preparation in the future and perceived efficacy of the preparation, as reported by participants (Section 8.4.1).

4. Differences between bowel preparations in the type and severity of reported adverse events (Section 8.4.1).

7. STUDY SUBJECTS

7.1 Disposition of Subjects

All enrolled subjects are listed in Table E. This table outlines the details of consent, completion status and reasons for this status. For this study, a total of sixty-two subjects were screened. Two subjects chose to withdraw from the study: one due the anxiety associated with colonoscopy, and the other due to an Adverse Event (severe vomiting) resulting in the subject wishing to cease intake. One subject was deemed a delayed exclusion due to a positive pregnancy test during screening.

Table E: Disposition of Subjects

Patient Number	Initials	Date Of Birth	Consent	Enrolled	Final Visit	Arm	Completion Status	Reason
101	G-R	09/08/47	17/07/03	Yes	27/07/03	PicoPrep™ Capsules	Completed	N/A
102	R-R	18/01/52	17/07/03	Yes	21/07/03	PicoPrep™ Capsules	Completed	N/A
103	YSA	26/07/50	17/07/03	Yes	21/07/03	Standard Glycoprep™	Completed	N/A
104	T-D	08/08/46	22/07/03	Yes	28/07/03	Standard PicoPrep™	Completed	N/A
105	KCF	26/04/75	24/07/03	Yes	31/07/03	Standard PicoPrep™	Completed	N/A
106	S-V	19/03/64	06/08/03	Yes	11/08/03	Standard Glycoprep™	Completed	N/A
107	T-C	25/01/44	06/08/03	Yes	15/08/03	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
108	F-L	23/05/42	07/08/03	Yes	12/08/03	Standard Glycoprep™	Completed	N/A
109	M-T	30/04/44	07/08/03	Yes	12/08/03	Standard PicoPrep™	Completed	N/A
110	R-G	23/08/53	12/08/03	Yes	18/08/03	PicoPrep™ Capsules	Completed	N/A
111	BRH	03/09/63	14/08/03	Yes	21/08/03	PicoPrep™ Capsules	Completed	N/A
112	G-C	02/03/63	14/08/03	Yes	18/08/03	Standard PicoPrep™	Completed	N/A
113	R-S	26/09/71	14/08/03	Yes	18/08/03	Standard Glycoprep™	Completed	N/A
114	KGT	28/05/76	15/08/03	Yes	21/08/03	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
115	N-L	22/05/45	18/08/03	Yes	22/08/03	Standard Glycoprep™	Completed	N/A
116	A-P	07/07/77	18/08/03	Yes	22/08/03	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
117	B-D	31/10/56	18/08/03	Yes	22/08/03	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A

Patient Number	Initials	Date Of Birth	Consent	Enrolled	Final Visit	Arm	Completion Status	Reason
118	JEP	12/02/38	11/09/03	Yes	18/09/03	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
119	R-W	11/01/61	11/09/03	Yes	15/09/03	Standard Glycoprep™	Completed	N/A
120	BAW	31/01/60	12/09/03	Yes	17/09/03	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
121	MAM	30/04/70	12/09/03	Yes	N/A	Standard Glycoprep™	Delayed Exclusion	Positive pregnancy test
122	SGD	22/01/56	17/09/03	Yes	22/09/03	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
123	DKH	28/07/76	17/09/03	Yes	22/09/03	Standard Glycoprep™	Completed	N/A
124	M-A	05/01/59	17/09/03	Yes	24/09/03	PicoPrep™ Capsules	Completed	N/A
125	G-W	04/10/45	17/09/03	Yes	24/09/03	PicoPrep™ Capsules	Completed	N/A
126	AMM	19/12/62	17/09/03	Yes	25/09/03	PicoPrep™ Capsules	Completed	N/A
127	SJE	27/04/54	19/09/03	Yes	26/09/03	Standard Glycoprep™	Completed	N/A
128	ADW	03/10/56	13/10/03	Yes	16/10/03	PicoPrep™ Capsules	Completed	N/A
129	P-H	10/06/58	16/10/03	Yes	20/10/03	PicoPrep™ Capsules	Completed	N/A
130	J-S	31/07/81	31/10/03	Yes	05/11/03	Standard PicoPrep™	Completed	N/A
131	F-T	01/01/63	06/11/03	Yes	10/11/03	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
132	KHL	24/12/44	07/11/03	Yes	13/11/03	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
133	JCE	28/03/57	19/01/04	Yes	23/01/04	Standard PicoPrep™	Completed	N/A
134	M-M	20/09/38	19/01/04	Yes	23/01/04	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
135	PEB	30/04/56	20/01/04	Yes	23/01/04	PicoPrep™ Capsules	Completed	N/A
136	FAW	25/07/54	06/02/04	Yes	09/02/04	Standard Glycoprep™	Completed	N/A
137	RSM	29/01/72	06/02/04	Yes	09/02/04	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
138	GMC	25/07/44	06/02/04	Yes	11/02/04	PicoPrep™ Capsules	Withdrawn	Subject Request
139	AEN	22/04/42	09/02/04	Yes	11/02/04	PicoPrep™ Capsules	Completed	N/A
140	RCW	02/01/52	12/02/04	Yes	16/02/04	Standard PicoPrep™	Completed	N/A

Patient Number	Initials	Date Of Birth	Consent	Enrolled	Final Visit	Arm	Completion Status	Reason
141	C-W	14/04/60	12/02/04	Yes	19/02/04	Standard PicoPrep™	Completed	N/A
142	G-F	30/03/43	12/02/04	Yes	16/02/04	Standard PicoPrep™	Completed	N/A
143	MFB	14/09/70	19/02/04	Yes	26/02/04	Standard PicoPrep™	Completed	N/A
144	M-V	21/08/67	19/02/04	Yes	24/02/04	PicoPrep™ Capsules	Completed	N/A
145	B-W	06/03/52	19/02/04	Yes	24/02/04	Standard PicoPrep™	Completed	N/A
146	JAK	28/03/84	20/02/04	Yes	26/02/04	Standard Glycoprep™	Completed	N/A
147	P-F	02/04/67	20/02/04	Yes	25/02/04	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
148	SJW	23/04/71	05/03/04	Yes	08/03/04	Standard Glycoprep™	Completed	N/A
149	D-C	26/05/67	11/03/04	Yes	16/03/04	Standard PicoPrep™	Completed	N/A
150	G-C	05/11/47	11/03/04	Yes	15/03/04	PicoPrep™ Capsules	Completed	N/A
151	S-A	06/12/72	12/03/04	Yes	18/03/04	Standard Glycoprep™	Completed	N/A
152	PGB	10/03/52	15/03/04	Yes	17/03/04	Standard PicoPrep™	Completed	N/A
153	AMG	05/11/35	19/03/04	Yes	24/04/04	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
154	P-Q	13/06/49	19/03/04	Yes	23/04/04	Standard PicoPrep™	Completed	N/A
155	M-R	04/12/62	26/03/04	Yes	31/03/04	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
156	RST	14/03/50	29/03/04	Yes	01/04/04	PicoPrep™ Capsules	Completed	N/A
157	C-A	16/12/74	31/03/04	Yes	05/04/04	Standard Glycoprep™	Completed	N/A
158	EWP	08/10/52	07/04/04	Yes	13/04/04	PicoPrep™ Capsules	Completed	N/A
159	D-B	10/04/46	08/04/04	Yes	15/04/04	Hypertonic Solution and PicoPrep™ Capsules	Completed	N/A
160	A-G	01/02/61	14/04/04	Yes	N/A	Standard Glycoprep™	Withdrawn	Subject Request
161	GRN	21/08/49	19/04/04	Yes	23/04/04	Standard Glycoprep™	Completed	N/A
162	M-A	11/05/59	30/04/04	Yes	05/05/04	PicoPrep™ Capsules	Completed	N/A

7.2 Protocol/Study Procedure Deviations

This study was conducted in compliance with the protocol agreed to by the Sponsor and the Investigator.

Two protocol deviations to the visit schedule occurred. As per visit schedule, Visit 1 procedures must occur 3 days before Visit 2. Both subject 139 (AEN) and subject 152 (PGB) underwent Visit 1 procedures 2 days prior to Visit 2. The protocol waivers were approved by the Sponsor and signed by the Investigator. These deviations were noted in the subject notes and a file note was filed in the subject study file.

The number of completed subjects at the close of the study was 59, instead of 60. It has been determined that this was a result of poor documentation and tracking of subjects, resulting in only one of the two withdrawals being replaced as per the protocol.

Two subjects did not receive the correct IP as per the Randomisation Preparation List. It has been determined that this was due to an error in the preparation of the printed packaging contents. Packaging followed the listed contents as printed on the pack, as such subject 137 received HYPC instead of PS, and subject 139 received PCA instead of HYPC. As a result, an additional subject received PCA instead of PS.

8. EFFICACY EVALUATION

8.1 Data Sets Analysed

The 59 subjects that completed the study were included in the efficacy analyses. Subjects withdrawn from the study were not included in the efficacy analyses, with the exception of the Patient Evaluation data of subject 138, who whilst not completing the study, did in fact take the IP. The data sets analysed for the Patient Evaluation included: taste of preparation, ease of completion, ability to complete preparation, willingness to use preparation in the future and perceived efficacy of the preparation. These evaluations were completed by subjects after taking the preparation and were returned at Visit 2 (Day 3 + 7).

The data sets analysed for the Doctor Evaluation and Sedationist Evaluation included: overall adequacy of bowel preparation, adequacy of preparation in rectum, adequacy of bowel preparation in transverse colon, adequacy of bowel preparation in caecum and adequacy of bowel preparation in terminal ileum. These evaluations were completed by doctors and sedationists during the colonoscopy performed at Visit 2 (Day 3 + 7).

Subjects' previous medical history including any previous colonoscopic procedures was noted as well as the baseline symptoms. These were not analysed for their significance but was noted down for future analyses.

8.2 Demographic and Other Baseline Characteristics

Subjects were from a variety of ethnic backgrounds and countries of birth. The age range of eligible subjects was from 19 (pt # 146) to 68 (pt #153), with the mean age being 45.65 years. The eligible population contained 32 females and 30 males. The average weight at baseline of the male population was 84.22kg, with an average height of 176.42cm. The mean female weight was 65.35kg and height was 162.60cm. The majority (77.42%) of the study population were non-smokers, with 12/62 (19.35%) subjects who smoked daily. Nineteen subjects (30.64%) consumed alcohol on a daily basis, whilst the majority of subjects (32/62, 51.61%) were occasional alcohol drinkers (Section 12.1.10).

All subject medical and demographic history was recorded at baseline (see Section 12.1.3 for PP subjects). Of the 59 subjects who completed the study (PP), it was found that 30/59 subjects had not undergone a colonoscopy at this site before. 5/59 (8.47%) did not have any prior relevant medical history at the time of colonoscopy investigation, 17/59 (28.81%) subjects presented with peri-rectal bleeding. Of the 59 subjects, 10/59 (16.95%) subjects had a history of haemorrhoids. 5/59 (8.47%) subjects had a history of inflammatory bowel disease, and 5/59 (8.47%) had IBS symptoms. 12/59 (20.33%) subjects had previous polypectomies or were found to have pseudo-polyps in the past.

8.3 Measurements of Treatment Compliance

Average compliance for HYPC was 100.0%, PCA was 91.6%, PS was 100.0%, GS was 100.0%, and overall compliance was measured at 97.9% (See Section 12.1.4). Compliance was determined by a study drug count at Visit 2 using the following formulas:

Hypertonic and PicoPrep™ Capsules Compliance (%)

Step 1	$= \frac{(10 - \text{HY weight returned})}{10} \times 10$	= HY Compliance
Step 2	$= \frac{(30 - \text{no. PC returned})}{20}$	= PC compliance
Step 3	$= \frac{\text{HY Compliance} + \text{PC compliance}}{2}$	= Overall per subject compliance
Step 4	$= \frac{\textit{Sum of overall per subject compliance}}{14}$	*= Arm 1 Compliance*

PicoPrep™ Capsules (%)

Step 1 $= \frac{(30 - \text{no. PCA returned})}{30}$ = Per subject compliance

Step 2 $= \frac{\textit{Sum of overall per subject compliance}}{18}$ = *Arm 2 Compliance*

Standard PicoPrep™(%)

Step 1 $= \frac{(15.546 - \text{PS weight returned})}{15.546}$ = Per subject compliance

Step 2 $= \frac{\textit{Sum of overall per subject compliance}}{14}$ = *Arm 3 Compliance*

Standard Glycoprep™ (%)

Step 1 $= \frac{(200 - \text{GS weight returned})}{200}$ = Per subject compliance

Step 2 $= \frac{\textit{Sum of overall per subject compliance}}{14}$ = *Arm 4 Compliance*

Overall Compliance(%) $= \frac{\textit{Arm 1 + Arm 2 + Arm 4 + Arm 5}}{4}$

Whilst there was 100% compliance in the PS and GS Arms, subjects commonly complained of poor palatability and difficulty completing. Difficulty in swallowing the large capsules was the claim for poor compliance in the PCA arm. The capsule size was of concern in one subject, who although was able to tolerate the investigational product posed the question of future compliance in other subjects who may have difficulty taking tablets. Difficulty in completing the preparations were directly related to the amount of preparations that needed to be taken, such as the high volume of hypertonic solution and the large amount of PicoPrep™ capsules.

8.4 Efficacy Results

Efficacy data consisted of the following:

1. Doctor Evaluation Form

Doctors assessed the general efficacy of the bowel preparation as well as rating the effectiveness of the bowel preparation in four different areas of the colon (rectum, transverse colon, caecum and terminal ileum).

2. Sedationist Evaluation Form

Sedationists assessed the general efficacy of the bowel preparation as well as rating the effectiveness of the bowel preparation in four different areas of the colon (rectum, transverse colon, caecum and terminal ileum).

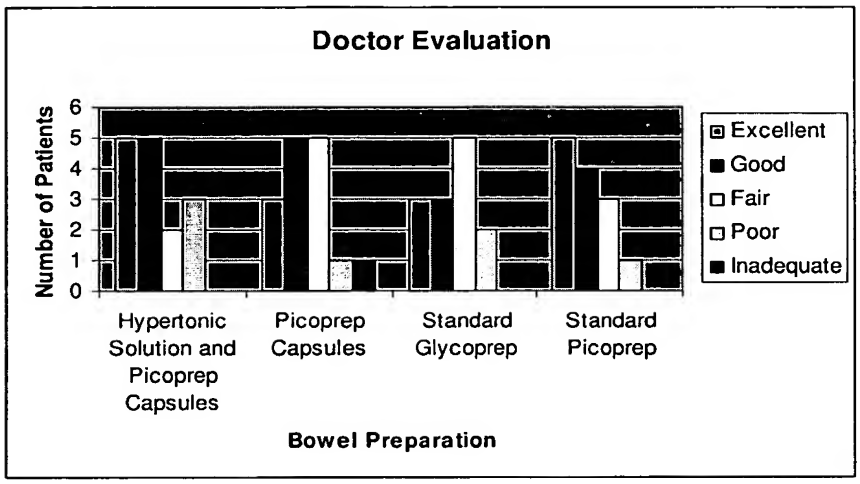
3. Patient Evaluation Form

Subjects evaluated the bowel preparation on five different characteristics: ease of completion, taste of preparation, ability to complete the preparation, willingness to use the preparation in the future and perceived efficacy of the preparation. These formed the basis for assessing subject tolerance of the bowel preparation.

8.4.1 Analysis of Efficacy

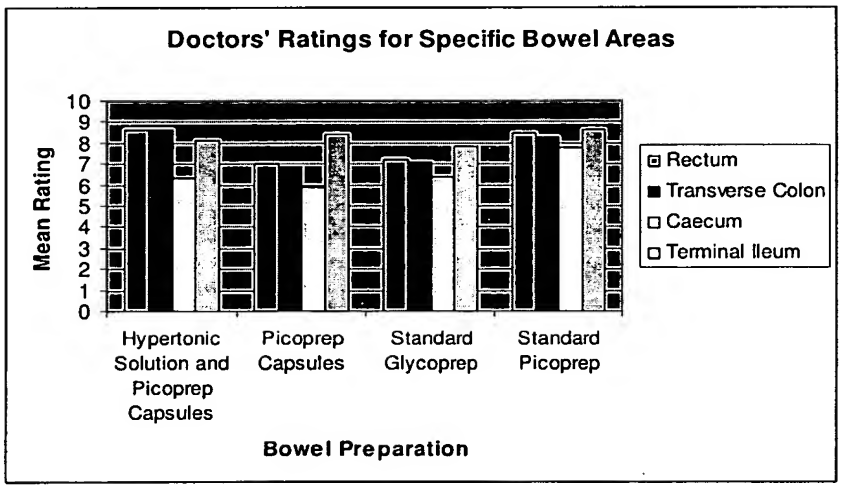
1. Doctor Evaluation

Figure 1



In regards to the general efficacy of each bowel preparation in cleansing the bowel, no significant differences in doctors' ratings of the four bowel preparations were observed. As seen in Figure 1, differences in doctors' ratings of general efficacy of the preparations were minor, with the HYPC (5/15, 33.33%) and the PS Arms (5/14, 35.71%) slightly more often rated as 'excellent' in terms of general efficacy than PCA (3/16, 18.75%) and GS (3/14, 21.42%) arms. See Section 12.1.5.

Figure 2



As seen in Figure 2, doctors' ratings (out of 10) of the adequacy of colonic cleansing for specific bowel areas indicated that HYPC and PS were regarded as more effective in cleansing certain bowel areas than PCA or GS. Significant differences between the arms for the specific bowel areas are outlined below.

1.1 Rectum – No significant differences were observed in the ratings of the efficacy of the four bowel preparations in cleansing the rectum. However a trend, although not significant, was obtained indicating that PS (mean rating = 8.47/10) were more effective than PCA (mean rating = 7.00/10) in cleansing the rectum ($p < 0.06$).

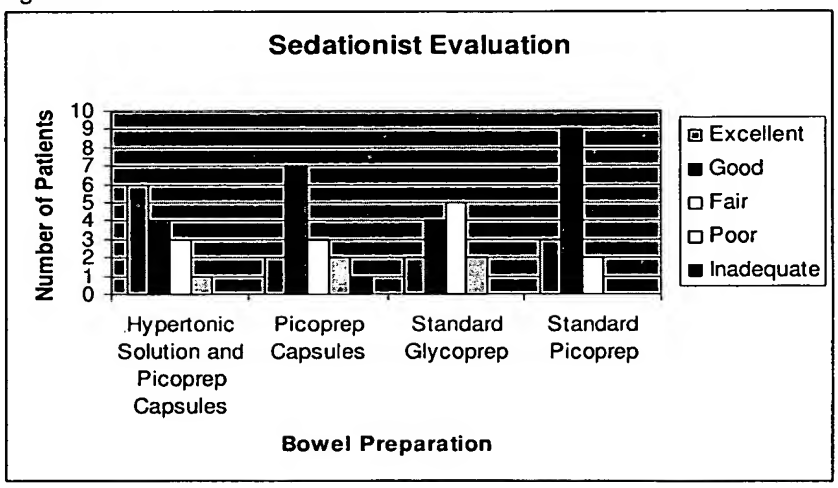
1.2 Transverse Colon – The HYPC bowel preparation (mean rating = 8.60/10) was rated as significantly more effective in cleansing the transverse colon than the PCA bowel preparation (mean rating = 6.68/10, $p < 0.03$). No other significant findings were obtained, however, a trend was observed indicating that PS (mean rating = 8.27/10) was more effective than PCA at cleansing the transverse colon (mean rating = 6.87/10, $p < 0.08$).

1.3 Caecum – Several significant differences were obtained between Arms in terms of adequate cleansing of the caecum. Doctors' ratings indicated that PS (mean rating = 7.80/10) more adequately cleansed the caecum than PCA (mean rating = 5.93/10, $p < 0.03$). Additionally, the HYPC bowel preparation (mean rating = 6.33/10) was found by doctors to be significantly more effective at cleansing the caecum than the PCA bowel preparation (mean rating = 5.93/10, $p < 0.03$).

1.4 Terminal Ileum – No significant differences or trends were observed between the arms in the cleansing the terminal ileum.

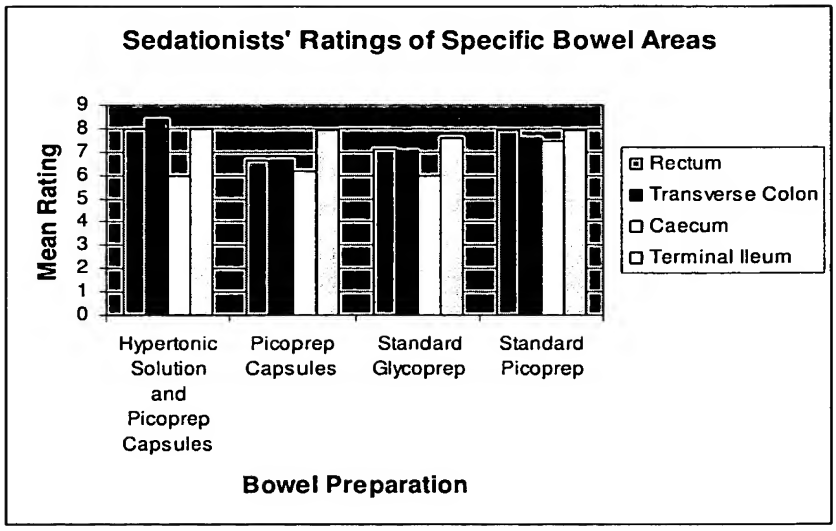
2. Sedationist Evaluation

Figure 3



In regards to the general efficacy of each bowel preparation in cleansing the bowel, no significant differences in sedationists' ratings of the four bowel preparations were observed. As seen in Figure 3, differences in sedationists' ratings of general efficacy of the preparations were minor, with the HYPC arm (6/15, 40.00%) more often rated as 'excellent' in terms of general efficacy than PCA (2/15, 13.33%), GS (2/14, 14.29%) or PS (2/15, 13.33%). See Section 12.1.5.

Figure 4



As seen in Figure 4, sedationists' ratings (out of 10) of the adequacy of colonic cleansing for specific bowel areas indicated that HYPC and PS were regarded as more effective in cleansing certain bowel areas than PCA or GS. Significant differences between the arms for the specific bowel areas are outlined below.

2.1 Rectum – No significant differences were observed regarding the efficacy of the various bowel preparations in cleansing the rectum. However a trend was observed, although not significant, indicating that sedationists viewed PS (mean rating = 7.93/10) as more effective than PCA (mean rating = 6.67/10) in cleansing the rectum ($p < 0.058$).

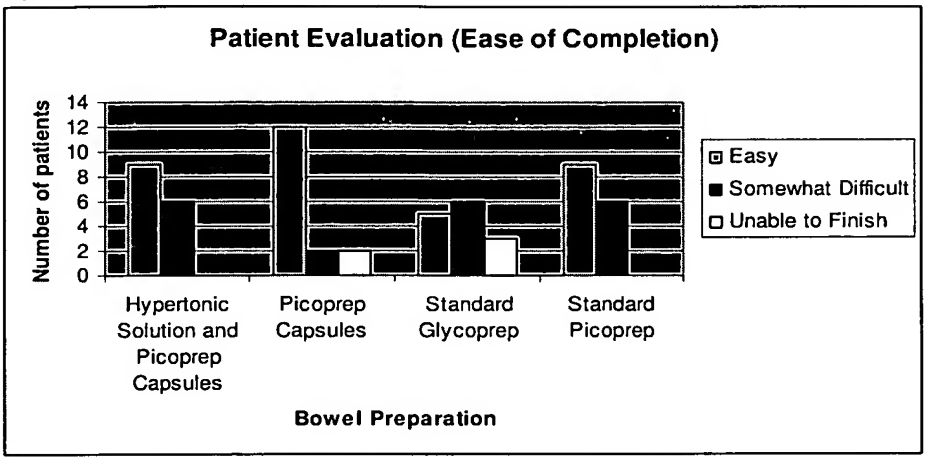
2.2 Transverse Colon – Sedationists rated HYPC (mean rating = 8.40/10) as significantly more effective in cleansing the transverse colon than PCA (mean rating = 6.67/10, $p < 0.03$). Additionally, sedationists ratings indicated that HYPC (mean rating = 8.40/10) was by sedationists as significantly more effective in cleansing the transverse colon than Standard GS (mean rating = 7.07/10, $p < 0.03$).

2.3 Caecum – No significant differences or trends were observed between the arms in the cleansing of the caecum.

2.4 Terminal Ileum - No significant differences or trends were observed between the arms in the cleansing of the terminal ileum.

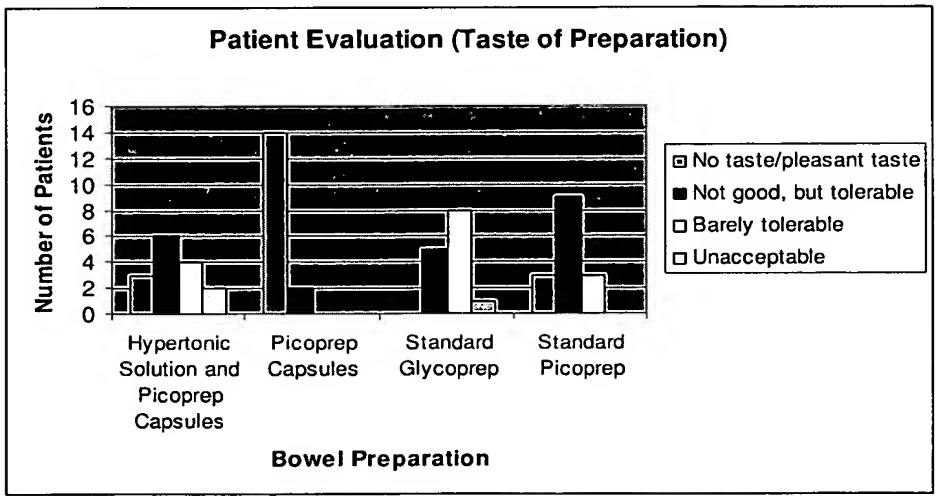
3. Patient Evaluation

Figure 5



As seen in Figure I.5, when compared to the other arms, more subjects in the PicoPrep™ Capsule arm (12/17, 70.58%) rated this bowel preparation as easy to complete. This was significantly different from the Glycoprep™ arm, in which only 5/14 subjects (35.71%), rated the preparation as easy to complete ($p < 0.03$). No other significant differences or trends were observed for the ease of completion between the four bowel preparations. See Section 12.1.5.

Figure 6

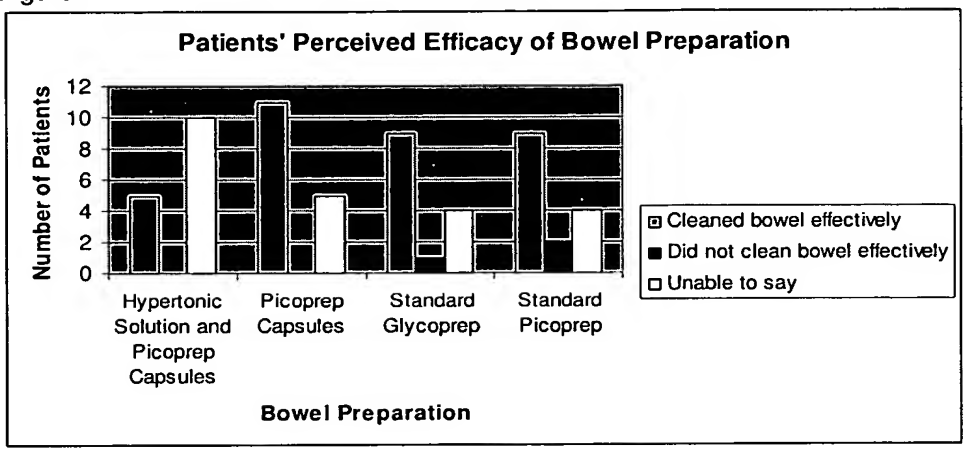


A number of significant findings were obtained regarding subjects' ratings of the taste of the four bowel preparations. Figure 6 demonstrates that the majority of subjects in the PCA arm (14/17, 82.35%) rated the preparation as having a pleasant or nil taste. This was significantly different from the GS preparation in which no subjects rated the taste as pleasant ($p < 0.0001$), the HYPC arm, in which 3/15 subjects (20.00%) rated this preparation as having a pleasant or nil taste ($p < 0.0002$), and the PS arm, in which 3/14 subjects (21.43%) rated this preparation as having a pleasant or nil taste.

Additionally, significantly more subjects in the GS arm (8/14, 57.14%) rated their preparation as barely tolerable compared to subjects in the PCA arm (0/17, $p < 0.0008$), and significantly more

subjects in the PS arm (9/14, 64.29%) rated their preparation as not good but tolerable, compared to those in the PCA arm (2/17, 114.76%, $p < 0.021$). No other significant findings or trends were observed for subjects' ratings of the taste of the bowel preparations.

Figure 7



While no significant findings were obtained for subject's ratings of perceived efficacy of the bowel preparations, several trends were observed. As demonstrated in Figure 7, more subjects in the HYPC arm (10/15, 66.67%) were unable to state how effective they found the bowel preparation compared to subjects in the PS (4/14, 28.57%, $p < 0.07$), GS (4/14, 28.57%, $p < 0.07$) and PCA (5/17, 29.41%, $p < 0.07$) arms. Additionally, more subjects in the PCA arm (11/17, 64.71%) thought that their preparation cleaned their bowel effectively compared to those in the HYPC arm (5/15, 33.33%, $p < 0.07$). This data has no clear correlation with the Doctor and Sedationist Evaluations.

8.4.2 Handling of Drop-outs and Missing Data

The data from the ITT group (screening failures, delayed exclusions and withdrawals) were not collated and analysed within the efficacy data, with the exception of the Patient Evaluation of subject 138.

A single subject was classified as a delayed exclusion. This subject did not receive any bowel preparation and did not undergo a colonoscopy, as the Baseline Visit blood test results revealed subject was pregnant. Subject returned all study medication and the unused Patient Evaluation Form upon receiving the news. As such, the subject was not included in any efficacy and safety analyses.

One withdrawn subject (160) at study Visit 2 due to anxiety associated with concern of undergoing a colonoscopic evaluation. Subject had undergone all screening procedures, but did not take any bowel preparation. As such, the subject was not included in any efficacy and safety analyses.

Missing data points in the laboratory studies resulted in the subjects' removal from that data set (i.e. specific tests) analysis as only 2 data points are involved.

8.5 Efficacy Conclusions

Doctor Evaluation

In the overall adequacy of colon cleansing, doctors found no difference between the preparations used. However, when looking at specific areas of the colon, several differences arose between the four bowel preparations. Doctors rated both PS and HYPC as being more

effective in cleansing the caecum than PCA. Additionally, doctors rated HYPC as more effective than PCA when cleansing the transverse colon.

The two trends that were observed demonstrated that doctors rated PS as more effective than PCA when cleansing the rectum and the transverse colon. While these findings only approached significance, a larger sample size may result in significant findings.

Sedationist Evaluation

In the overall adequacy of cleansing, sedationists found no difference between the bowel preparations used. However, when looking at specific areas of the colon, several differences arose between the four preparations. Sedationists rated the HYPC as more effective in cleansing the transverse colon than the GS preparation. The HYPC preparation was also rated by sedationists as more effective in cleansing the transverse colon than PCA.

In addition to these findings, two trends were observed, illustrating that sedationists rated PS as more effective in cleansing the rectum and caecum than PCA. These trends did not reach significance, but with a larger sample size these differences may become significant.

The differences noted between the Doctor and Sedation Evaluations may result from a number of factors, such as: Sedationists need to tend to the subject during the procedure, thus drawing their attention from the viewing screen, or Sedationists not trained like a gastroenterologist to identify where in the colon the colonoscope currently resides, thus misinterpreting the assessments points.

Patient Evaluation

The PCA bowel cleansing preparation was the preparation that was best tolerated by subjects prior to colonoscopy. Subjects reported that they found this preparation easier to complete than GS and it was also found that subjects preferred the taste of PCA to the taste of GS, PS, and the HYPC preparation. Additionally, more subjects in the GS arm rated the taste of the preparation as only barely tolerable compared to PCA and more subjects in the PS arm rated this preparation as not good, but tolerable compared to subjects in the PCA arm. Subjects' reports of greater tolerability of the PCA bowel preparation may be due to the texture and taste of the other preparations.

Non-significant trends indicated that subjects viewed PCA as more effective at cleansing the bowel than HYPC. In addition, more subjects in the HYPC arm were unsure of the efficacy of their preparation compared to those taking PCA, PS or GS. While these differences in perceptions of efficacy of the various bowel treatments only approached significance, they may reflect trends that could become significant with a larger sample size. The uncertainty that subjects had concerning the efficacy of the HYPC preparation may be an indication of subjects' reactions to a new bowel preparation that is not yet available on the market, compared to GS or PS which are both readily available and widely known.

Conclusion

These findings indicate that overall, PCA were most favoured as a bowel preparation by subjects. However, doctors and sedationists generally rated the efficacy of Hypertonic Solution and PicoPrep™ Capsules, and PS as more effective than the other preparations in cleansing the bowel.

9. SAFETY EVALUATION

9.1 Adverse Events

9.1.1 Summary of Adverse Events

A total of 30 subjects reported adverse events over the duration of their participation in the study. Several subjects reported experiencing more than one adverse event over the course of the study, resulting in a total of 44 adverse events being reported by 30 subjects. Of the adverse events reported, 47.7% (21/44) were headaches and 18.1% (8/44) of the adverse events reported were gastrointestinal (e.g. vomiting, nausea or bloating). The majority of these AE's (25/44, 56.8%) were assessed as "probably related" to the bowel preparation taken, and a further 25.0% (11/44) of the adverse events reported were assessed as "possibly related" to the bowel preparation.

As part of the safety analyses, the number, type and severity of adverse events were separated according to the bowel preparation taken by the subject and compared with the other bowel preparations. Several significant differences between the bowel preparations in terms of the number, type and severity of adverse events reported was observed. Refer to Section 12.1.6 for tabulated data. Of particular note HYPC resulted in no nausea, vomiting, bloating, and faint/light headedness in any subject. In addition, the PCA and PS arms had a similar adverse event profile in the moderate/severe AE's, a marked difference in the number of headaches experienced in the mild AE's. 4/14 (28.57%) PS subjects experienced mild headaches, whereas only 1/16 (6.25%) of PCA subjects did (p=0.17).

9.1.1.1 PicoPrep™ Capsules vs. Standard Glycoprep™

There were no significant difference between PCA and GS in the number and type of moderate and severe adverse events that were reported by subjects. However, a statistically significant difference was observed between the two groups in regards to the number of mild adverse events that subjects experienced, with subjects in the GS group (6/14, 42.86%) reporting a significantly higher number of mild adverse events than in the PCA group (1/16, 6.25%) ($p < 0.031$). No significant differences were observed between the two bowel preparation groups in terms of the type of mild adverse events that subjects reported. A non-significant trend was observed in the event of mild headache there were 4/14 (28.57%) GS subjects versus 1/16 (6.25%) (p=0.33) PCA subjects experiencing this event.

The most common adverse events experienced overall by subjects using GS were headaches (5/14, 36%) and vomiting (2/14, 14.29%). The most common adverse events experienced by subjects using PCA were headaches (3/16, 18.75%) and vomiting (2/16, 12.50%).

9.1.1.2 PicoPrep™ Capsules vs. Standard PicoPrep™

There were no significant differences between the PCA preparation and the PS preparation in the number of moderate and severe adverse events that subjects reported. However, a significant difference was observed between the two groups in the number of mild adverse events that subjects experienced, with subjects in the PS arm (6/14, 42.86%) reporting a significantly higher number of mild adverse events than subjects in the PCA arm (1/16, 6.25%) ($p < 0.037$). No statistically significant difference was observed between the two preparation groups in the type of adverse events that subjects experienced. A non-significant trend observed in the event of mild headache there was 4/14 (28.57%) PS versus 1/16 (6.25%) (p=0.17) PCA subjects experiencing this event. The reason for this difference is unclear, given that the components of the two products are identical, it is only the delivery method which differs. Reasons for this difference may be a result of subjects taking PCA may be more likely to drink more water with the capsules than those who are taking PS and already having to consume 2L of a thick fluid before additional water intake.

The most common adverse events overall experienced by subjects using PCA were headaches (3/16, 18.75%) and vomiting (2/16, 12.50%). The most common adverse events overall experienced by subjects using PS were headaches (5/14, 35.71%) and faint / light headedness (2/14, 14.28%).

9.1.1.3 PicoPrep™ sachets vs. Hypertonic Solution and PicoPrep™ Capsules

There were no significant differences between the PS preparation and the HYPC preparation in the number and type of moderate and severe adverse events. Similarly, there were no significant differences between the two groups in the number or type of mild adverse events that subjects experienced. Two non-significant trends were observed; firstly in the event of moderate-severe headache there were 4/15 (26.66%) HYPC versus 1/14 (7.14%) (p=0.32) PS subjects experiencing this event, and secondly in the event of moderate-severe faint / light headedness, there were 2/14 (15.38%) PS versus 0/15 (0.00%) (p=0.48) HYPC.

The most common adverse events reported by subjects using HYPC were headaches (8/15, 53.33%) and faint / light headedness (1/15, 6.66%). The most common adverse events reported by subjects using PS were headaches (5/14, 35.71%) and faint / light headedness (2/14, 14.28%).

9.1.1.4 PicoPrep™ capsules vs. Hypertonic Solution and PicoPrep™ Capsules

There were no significant differences between the PCA preparation and the HYPC preparation in the number and type of moderate and severe adverse events. A non-significant trend observed in the event of moderate-severe headache, with 4/15 (26.66%) HYPC versus 2/16 (12.50%) (p=0.39) PCA subjects experiencing this event.

Similarly, there were no significant differences between the two groups in the number and type of mild adverse events that subjects experienced. However a non-significant trend was observed regarding the number of mild adverse events that subjects experienced. Subjects taking the HYPC (5/15, 33.33%) reported more mild adverse events than those using the PCA (1/16, 6.25%) ($p < 0.083$). Another non-significant trend regarding the type of adverse events that subjects experienced was observed, indicating that subjects in the HYPC arm (8/15, 53.33%) reported experiencing more headaches than subjects in the PCA arm (3/16, 18.75%) ($p < 0.066$).

The most common adverse events reported by subjects using HYPC were headaches (8/15, 53.33%) and faint / light headedness (1/15, 6.66%). The most common adverse events experienced by subjects using PCA were headaches (3/16, 18.75%) and vomiting (2/16, 12.5%).

9.1.1.5 Glycoprep™ sachets vs. Hypertonic solution combined with PicoPrep™ capsules

There were no significant differences between the GS preparation and the HYPC preparation in the number of moderate and severe adverse events that subjects reported. However a non-significant trend showed that more subjects reported moderate-severe headaches in the HYPC arm (4/15, 26.66%) than in the GS arm (1/14, 7.14%) (p=0.17).

Similarly, there were no significant differences between the two groups in the number of mild adverse events that subjects experienced. However, a significant difference was observed between the two groups in the type of adverse events that subjects experienced, with subjects using GS (2/14, 14.28%) reporting a higher number of gastroenterological adverse events (e.g. vomiting and nausea) than those taking HYPC (0/15, 0.00%) ($p < 0.0001$). The most common adverse events reported by subjects using HYPC were headaches (8/15, 53.33%) and faint / light headedness (1/15, 6.66%). The most common adverse events experienced by subjects using GS were headaches (5/14, 35.71%) and vomiting (2/14, 14.29%).

9.2 Clinical Laboratory Evaluation

There were no significant findings in the haematological laboratory results for the GS and PS arms. The PCA and HYPC arms saw statistical significance when leucocyte values were compared from Visit 1 and Visit 2 (PCA p=0.035, HYPC p=0.002). However these were determined to be of no clinical significance as a number of underlying concomitant conditions existed in the Study subjects. The PCA arm also yielded statistically significant values when platelet counts obtained at Visit 1 and Visit 2 were compared, however these were also

considered to be of no clinical significance. There were no significant changes noted in the serum electrolyte levels, in particular serum sodium, nor in serum osmolality.

Urinalysis demonstrated a number of significant changes. Urine electrolyte changes varied in each arm. Sodium levels is each arm did not demonstrate a statistically significant change, and any changes seen (HYPC Visit 1 92.73±36.76 and Visit 2 68.93±45.08; GS Visit 1 109.13±54.67 and Visit 2 126.46±62.11) were within normal range. As the levels of urine sodium were less than 200mmol/L this suggests that in these euvolaemic patients with intact renal function, changes where due to gastrointestinal loss.

PCA arm demonstrated statistically and clinically significant decrease in urine potassium levels between Visit 1 (mean ± standard deviation) (86.81±51.61) and Visit 2 (42.13±38.32) p=0.016, however still within normal range (25-75mmol/L). The urine chloride levels also demonstrated a statistically and clinically significant decrease from Visit 1 (138.93±59.45) to Visit 2 (78.91±46.05) p=0.014, normal range being 122-135mmol/L. The mean chloride level reduced from the normal range to a level significantly below the acceptable normal range.

The HYPC arm demonstrated statistically and clinically significant decreases in urine potassium Visit 1 (69.13±29.93) to Visit 2 (42.40±27.42) p=0.013, normal range being 25-75mmol/L. Urine chloride levels also demonstrated a statistically and clinically significant decrease from Visit 1 (122.73±46.97) to Visit 2 (73.14±40.97) p=0.032, normal range being 122-135mmol/L. The mean urine chloride level reduced from slightly below normal range to a level significantly below the acceptable normal range. This suggests chloride retention and therefore reduced urine chloride loss.

The PS arm demonstrated a statistically significant decrease in urine potassium levels from Visit 1 (76.00±52.97) and Visit 2 (27.71±25.81) p=0.017, normal range being 25-75mmol/L. Prior to intake of preparation urine excretion of potassium, while with in the normal range, had variation across the range and above. However there was a significant decrease in excreted urine potassium following ingestions of preparation. It can be deduced that potassium is selectively reabsorbed in normally functioning kidneys, in an attempt to maintain serum potassium concentration. No significant change was seen in serum potassium.

The GS arm demonstrated a statistically significant change in chloride levels from Visit 1 (122.13±60.14) and Visit 2 (75.73±35.36) p=0.064, normal range being 122-135mmol/L.The mean chloride level reduced from the low end of normal range to a level significantly below the acceptable normal range.

Osmolarity measures the kidneys ability to concentrate/dilute urine in fluctuating conditions. Changes in Specific Gravity indicate a change in the concentration of urine. The subjects taking PCA demonstrated statistically significant decreases in both. Changes in osmolarity from Visit 1 (736.06±220.22) to Visit 2 (539.13±198.99) p=0.011, with normal range being 100-800mmol/Kg. The specific gravity decreased from Visit 1 (1.019±0.006) to Visit 2 (1.015-0.005) p=0.017, with normal range being 1.005-1.030. The subjects taking HYPC demonstrated statistically significant changes in both osmolarity and specific gravity. Changes in osmolarity from Visit 1 (655.00±227.88) to Visit 2 (442.73±229.11) p=0.013, with normal range being 100-800mmol/Kg. The specific gravity from Visit 1 (1.018±0.006) to Visit 2 (1.013±0.007) p=0.091, with normal range being 1.005-1.030.

These changes were statistically and clinically significant. This indicates that the kidneys ability to alter the concentration in various conditions is not impaired. The less osmolar, and therefore less concentrated urine, were noted with associated decreases in urine chloride concentration in the above groups.

Subjects taking PS and GS showed no statistically or clinically significant changes in osmolarity or specific gravity. Indicating that neither of these preparations effect these measures.

Differences in urine osmolarity and urine potassium and chloride levels in the HYPC arm was less than the PCA arm, although the PCA arm had higher than usual baseline values. Whereas

PS and GS, showed little change with the exception of a negative change in one of the electrolytes.

9.3 Vital Signs, Physical Findings, and other Observations related to Safety

Physical examinations were only performed at Visit 1(PP). Of the physical examinations performed, 1/59 had faecal loading of the right colon at baseline, 1/59 reported abdominal tenderness at baseline. However these two conditions did not affect subjects' participation in the study. 5/59 subjects reported other conditions not clinically significant to the study (basal cell carcinoma, acne rosacea, shoulder rash, multiple solar keratosis cell carcinoma). Vital signs remained within normal ranges for Visit 1 and 2, and there were no major weight deviations in any arm between Visit 1 and 2.

9.4 Safety Conclusions

No adverse event was classed as serious or deemed definitely related to the investigational product. Overall, more subjects reported adverse events on GS (57.14%), than PCA (50.00%), HYPC (46.66%) and PS (41.17%). However, the adverse events in the PC arm were generally milder than any of the other arms.

Haematological results showed no significant trends or dramatic changes within parameters. Urine osmolarity decrease was reflected by a decrease in urine excreted potassium and chloride concentrations in the HYPC and PCA arms. There was less of a decrease in the HYPC arm, perhaps a reflection of the hypertonic solutions influence. It is of note that there were a greater number of headaches reported in these two groups.

PCA and PS had the same composition but delivered differently, however the results of the safety assessments differ. This may be a result of relative water intoxication. While the GS arm demonstrates the inert nature of PEG products.

10. DISCUSSION AND OVERALL CONCLUSIONS

Hypothesis

In evaluating the efficacy and safety of HYPC compared with PCA, GS, and PS as a bowel preparation, the hypotheses that HYPC would be better tolerated by subjects, would have a better side effect profile and would be as effective in cleansing the bowel as the other bowel preparations were tested.

Efficacy

The efficacy data demonstrates that while doctors and sedationists did not significantly differentiate between the different bowel preparations in the overall adequacy of bowel cleansing, when rating the cleanliness of the bowel according to specific bowel areas (i.e. rectum, transverse colon, caecum and terminal ileum), both agreed that HYPC was more effective in cleansing the transverse colon than the other bowel preparations. Doctors rated this preparation as significantly more effective than PCA, and sedationists rated this preparation as more effective than GS and PS in cleansing the transverse colon. Additionally, doctors rated both HYPC and PS and as being more effective in cleansing the caecum than PCA. While the ratings given to the efficacy of different bowel preparations varied slightly between doctors and sedationists, overall, doctors and sedationists agreed on the efficacy of the different preparations in cleansing various areas of the bowel. In general, both doctors and sedationists rated the efficacy of PS and HYPC as superior to PCA and GS. In the instances where doctors found significant differences between the preparations that sedationists did not, or vice versa, both agreed on which were the better preparations with only a few rating points determining significance.

HYPC preparation was equal or superior in efficacy, as assessed by the doctors and sedationists, compared to the other bowel preparations. When rating the preparations for tolerability, subjects reported that the PCA preparation was the most tolerable preparation to take prior to colonoscopy. Subjects appear to have found this preparation easier to complete than the GS preparation, and they stated that they preferred the taste of PCA to the taste of the GS, PS, and the HYPC.

Overall, the most overall efficacious bowel preparation would be HYPC, followed by PS. The most efficacious in subject tolerability is PCA.

Safety

The safety data suggests that while approximately half of the subjects in the HYPC arm experienced side effects that were possibly related to the bowel preparation, these adverse events were mostly mild. However the data suggests that PS results in fewer side effects, but PCA results in milder side effects. No serious adverse events were reported in any of the arms.

HYPC and PCA do not cause any significant clinical changes in laboratory results, except in urine chloride. However these results suggest that GS is the least likely to cause shifts in laboratory values.

Future Studies

While these results suggest that HYPC are highly effective in cleansing of the bowel, future studies should explore methods of reducing the side effect profile of the preparation, particularly reducing the amount of headaches subjects experience when taking the preparation. Additionally, improving the taste of the preparation would also assist in improving compliance and ease of completion as reported by subjects taking the preparation, and should be focused on in future studies.

In addition, to improve data clarity, a statistically significant subject population should be used, and only the Doctor should evaluate the efficacy of the bowel preparation, using a 5 point scale rather than 10.

Conclusions

These findings indicate that overall, PCA were most favoured as a bowel preparation by subjects, and, in general, resulted in a lower number of mild adverse events than the other preparations. However, doctors and sedationists generally rated the efficacy of HYPC, and PS as more effective than the other preparations in cleansing the bowel. Future studies should be considered to increase the population size to statistical significance

11. REFERENCE LIST

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12. APPENDICES

12.1 Subject Data Listings

12.1.1 Discontinued Subjects and Protocol Deviations

Patient No.	Sex	Age	Discontinued or Deviation	Reason for discontinuation or Protocol deviation
121	Female	33	Discontinued	Delayed Exclusion – positive pregnancy test.
137	Male	32	Deviation from randomisation schedule	Incorrect labelling of randomised packaging
138	Female	59	Discontinued	Withdrawn – Adverse Event
139	Female	61	Deviation from visit schedule and from randomisation schedule	Performed Visit 1 procedures 2 days prior to Visit 2 (must be 3 days), and incorrect labelling of randomised packaging.
152	Male	52	Deviation from visit schedule	Performed Visit 1 procedures 2 days prior to Visit 2 (must be 3 days)
160	Male	43	Discontinued	Withdrawn – did not undergo colonoscopy.

12.1.2 List of Subjects Excluded from Efficacy Analysis

Patient No.	Sex	Age	Reason Excluded from Efficacy Data
121	Female	33	Delayed Exclusion – positive pregnancy test.
138	Female	59	Withdrawn – AE, unable to complete preparation.*
160	Male	43	Withdrawn – did not undergo colonoscopy.

* Included in Patient Evaluation only.

12.1.3 Demographic Data

Patient Number	Initials	Sex	DOB	Age at Consent	Ethnicity	Country of Birth	Smoking Status	Alcohol	Pregnancy	Height (cm)	Weight at Baseline (Kg)
101	G-R	M	09/08/47	56	Caucasian	Australia	Non	Daily	N/A	188.0	105
102	R-R	M	18/01/52	51	Asian	Hong Kong	Daily	Daily	N/A	182.8	75.5
103	YSA	M	26/07/50	53	Hispanic	Peru	Non	Occasional	N/A	153.0	51.5
104	T-D	F	08/08/46	57	Caucasian	Australia	Non	Daily	N/A	180.3	102.0
105	KCF	M	26/04/75	28	Caucasian	N/A	Daily	Occasional	Negative	168.0	65.5
106	S-V	F	19/03/64	39	Caucasian	India	Non	Occasional	Negative	155.0	65.1
107	T-C	F	25/01/44	59	Caucasian	Australia	Non	Never	Negative	170.0	65.4
108	F-L	M	23/05/42	61	Caucasian	Australia	Non	Daily	N/A	171.5	73.3
109	M-T	F	30/04/44	59	Caucasian	Australia	Non	Daily	Negative	180.0	58.0
110	R-G	M	23/08/53	49	Caucasian	Australia	Non	Occasional	N/A	177.0	85.5
111	BRH	M	03/09/63	39	Caucasian	Australia	Non	Occasional	N/A	178.0	85.0
112	G-C	M	02/03/63	40	N/A	Australia	Daily	Daily	N/A	180.0	88.5
113	R-S	M	26/09/71	31	Caucasian	Australia	Non	Occasional	N/A	181.0	100.0
114	KGT	M	28/05/76	27	Caucasian	N/A	Non	Occasional	N/A	178.0	85.0
115	N-L	M	22/05/45	58	N/A	Egypt	Non	Occasional	N/A	185.4	93.5
116	A-P	F	07/07/77	26	Caucasian	Australia	Non	Occasional	Negative	173.0	70.0
117	B-D	F	31/10/56	46	Asian	Hong Kong	Non	Never	Negative	155.0	54.0
118	JEP	F	12/02/38	65	Caucasian	Australia	Non	Daily	N/A	165.0	63.6
119	R-W	M	11/01/61	42	Caucasian	Australia	Occasional	Occasional	N/A	187.0	95.5
120	BAW	F	31/01/60	43	Caucasian	Australia	Non	Occasional	Negative	168.0	83.0
121	MAM	F	30/04/70	33	Hispanic	Australia	Daily	Daily	Positive	162.5	74.0
122	SGD	M	22/01/56	47	Caucasian	China	Occasional	Never	N/A	180.0	89.0
123	DKH	F	28/07/76	27	Caucasian	Australia	Daily	Occasional	Negative	166.0	54.5

Patient Number	Initials	Sex	DOB	Age at Consent	Ethnicity	Country of Birth	Smoking Status	Alcohol	Pregnancy	Height (cm)	Weight at Baseline (Kg)
124	M-A	F	05/01/59	44	Caucasian	Australia	Non	Occasional	Negative	155.0	60.5
125	G-W	M	04/10/45	57	Caucasian	Australia	Non	Occasional	N/A	180.0	92.5
126	AMM	F	19/12/62	40	Caucasian	Australia	Non	Daily	Negative	155.0	79.0
127	SJE	F	27/04/54	49	Caucasian	Australia	Non	Occasional	Negative	174.0	58.2
128	ADW	M	03/10/56	47	Caucasian	United Kingdom	Non	Daily	N/A	185.0	87.5
129	P-H	M	10/06/58	45	Caucasian	Australia	Non	Daily	N/A	175.0	80.6
130	J-S	F	31/07/81	22	Caucasian	Australia	Daily	Occasional	Negative	165.0	63.2
131	F-T	M	01/01/63	40	Caucasian	Australia	Non	Occasional	N/A	163.0	80.1
132	KHL	M	24/12/44	58	Asian	China	Non	Never	N/A	170.0	74.0
133	JCE	F	28/03/57	46	Caucasian	Australia	Non	Never	Negative	157.5	66.5
134	M-M	M	20/09/38	65	Caucasian	Australia	Non	Daily	N/A	177.8	95.2
135	PEB	M	30/04/56	47	Caucasian	Australia	Non	Occasional	N/A	178.0	78.2
136	FAW	F	25/07/54	49	Caucasian	Australia	Non	Occasional	Negative	170.0	58.5
137	RSM	M	29/01/72	32	Caucasian	Australia	Daily	Daily	N/A	187.5	92.5
138	GMC	F	25/07/44	59	Caucasian	Australia	Non	Never	Negative	162.5	56.8
139	AEN	F	22/04/42	61	Caucasian	Australia	Daily	Daily	Negative	175.0	76.5
140	RCW	F	02/01/52	52	Caucasian	Australia	Non	Occasional	N/A	160.0	68.5
141	C-W	F	14/04/60	43	Caucasian	N/A	Non	Occasional	N/A	160.0	58.6
142	G-F	F	30/03/43	60	Caucasian	Italy	Non	Occasional	N/A	165.0	75.0
143	MFB	F	14/09/70	33	Caucasian	Australia	Daily	Occasional	Negative	157.0	61.5
144	M-V	F	21/08/67	36	Caucasian	Croatia	Non	Occasional	Negative	169.0	56.8
145	B-W	F	06/03/52	51	Caucasian	Australia	Non	Occasional	N/A	153.0	56.0
146	JAK	F	28/03/84	19	Caucasian	Australia	Daily	Occasional	Negative	153.0	51.9
147	P-F	F	02/04/67	36	Caucasian	Australia	Non	Occasional	Negative	165.0	78.0
148	SJW	M	23/04/71	32	Caucasian	Australia	Daily	Daily	N/A	187.5	91.7

Patient Number	Initials	Sex	DOB	Age at Consent	Ethnicity	Country of Birth	Smoking Status	Alcohol	Pregnancy	Height (cm)	Weight at Baseline (Kg)
149	D-C	F	26/05/67	36	Caucasian	Australia	Non	Never	Negative	165.0	79.8
150	G-C	M	05/11/47	56	Caucasian	Australia	Non	Occasional	N/A	175.0	87.0
151	S-A	F	06/12/72	31	Caucasian	Australia	Non	Occasional	Negative	150.0	50.0
152	PGB	M	10/03/52	52	Caucasian	Australia	Non	Daily	N/A	160.0	60.0
153	AMG	F	05/11/35	68	Caucasian	Italy	Non	Never	N/A	150.0	55.3
154	P-Q	F	13/06/49	54	Caucasian	Australia	Daily	Never	N/A	162.5	46.5
155	MER	M	04/12/62	41	Caucasian	Australia	Non	Occasional	N/A	167.0	78.6
156	RST	M	14/03/50	54	Caucasian	Australia	Non	Daily	N/A	169.0	90.5
157	C-A	F	16/12/74	29	Caucasian	Australia	Non	Never	Negative	140.0	43.4
158	EWP	M	08/10/52	51	Caucasian	Australia	Non	Occasional	N/A	180.0	99.5
159	D-B	M	10/04/46	57	Caucasian	Italy	Non	Daily	N/A	168.0	89.8
160	A-G	M	01/02/61	43	Caucasian	Australia	Non	Never	N/A	181.0	75.0
161	GRN	M	21/08/49	55	Caucasian	Australia	Non	Daily	N/A	179.0	81.0
162	M-A	F	11/05/59	44	Caucasian	Australia	Non	Occasional	N/A	165.0	101.2

12.1.4 Compliance Data

Table 12.1.4.1: Compliance of Hypertonic Solution and PicoPrep™ Capsules

Pt No.	HY Bottles dispensed (mg)	HY returned	HY Compliance	# PC dispensed	# PC returned	PC compliance *	Overall Compliance %
107	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
114	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
116	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
117	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
118	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
120	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
122	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
131	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
132	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
134	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
137	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
147	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
153	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
155	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
159	1 (15.564mg)	0	100.0%	30	10	100.0%	**100.0%**
					Overall Compliance %		**100.0%**

* PC used per protocol was 20 capsules. Therefore, the return of 10 capsules indicates 100% compliance.

Table 12.1.4.2: Compliance of PicoPrep™ Capsules

Patient Number	No. capsules dispensed	No. capsules returned*	Overall Compliance %
101	30	0	**100.0%**
102	30	0	**100.0%**
110	30	0	**100.0%**
111	30	0	**100.0%**
124	30	0	**100.0%**
125	30	0	**100.0%**
126	30	0	**100.0%**
128	30	0	**100.0%**
129	30	0	**100.0%**
135	30	0	**100.0%**
139	30	15	**50.0%**
144	30	15	**50.0%**
150	30	15	**50.0%**
156	30	0	**100.0%**
158	30	0	**100.0%**
162	30	0	**100.0%**
		Average Compliance %	**91.6%**

* PC used per protocol was 30 capsules. Therefore, the return of 0 capsules indicates 100% compliance.

Table 12.1.4.3: Compliance of Standard PicoPrep™

Patient Number	Sachets dispensed (mg)	No. sachets returned full	Overall Compliance %
104	1 (15.567mg)	0	100.0%
105	1 (15.567mg)	0	100.0%
109	1 (15.567mg)	0	100.0%
112	1 (15.567mg)	0	100.0%
130	1 (15.567mg)	0	100.0%
133	1 (15.567mg)	0	100.0%
140	1 (15.567mg)	0	100.0%
141	1 (15.567mg)	0	100.0%
142	1 (15.567mg)	0	100.0%
143	1 (15.567mg)	0	100.0%
145	1 (15.567mg)	0	100.0%
149	1 (15.567mg)	0	100.0%
152	1 (15.567mg)	0	100.0%
154	1 (15.567mg)	0	100.0%
		Average Compliance %	**100.0%**

Table 12.1.4.4: Compliance of Standard Glycoprep™

Patient Number	No. dispensed sachets (g)	No. sachets returned full	Overall Compliance %
103	1 (200g)	0	100.0%
106	1 (200g)	0	100.0%
108	1 (200g)	0	100.0%
113	1 (200g)	0	100.0%
115	1 (200g)	0	100.0%
119	1 (200g)	0	100.0%
123	1 (200g)	0	100.0%
127	1 (200g)	0	100.0%
136	1 (200g)	0	100.0%
146	1 (200g)	0	100.0%
148	1 (200g)	0	100.0%
151	1 (200g)	0	100.0%
157	1 (200g)	0	100.0%
161	1 (200g)	0	100.0%
		Average Compliance %	**100.0%***

Overall Compliance for PP subjects

The overall compliance for HYPC, PCA , PS and GS for PP subjects only, was 100.0%, 91.6%, 100.0% and 100.0%, respectively.

12.1.5 Efficacy Response Data

12.1.5.1 Doctor Evaluation

Table 12.1.5.1a Comparison of 'Hypertonic Solution and PicoPrep™ Capsules' and 'PicoPrep™ Capsules' in adequacy of cleansing

Doctor Evaluation Question	*Response*	*Hypertonic Solution and PicoPrep™ Capsules* (n=15) n (%)	*PicoPrep™ Capsules* (n=15) n (%)	*P-value*
Adequacy of cleansing	Excellent	5 (33)	3 (20)	0.68
	Good	5 (33)	5 (33)	NS
	Fair	2 (13)	5 (33)	0.38
	Poor	3 (20)	1 (7)	NS
	Inadequate	0 (0)	1 (7)	NS
Missing data		0 (0)	0 (0)	

Table 12.1.5.1b Comparison of 'Hypertonic Solution and PicoPrep™ capsules' and 'PicoPrep™ Capsules' rating in specific bowel areas

Bowel Preparation	Mean Rating for Specific Bowel Areas (out of 10)			
	Rectum	Transverse Colon	Caecum	Terminal Ileum
Hypertonic Solution and PicoPrep™ Capsules	8.60	8.60	6.33	8.13
PicoPrep™ Capsules	7.00	6.86	5.93	8.42
p-value	0.14	0.03	0.03	0.57

Table 12.1.5.1c Comparison of 'Hypertonic Solution and PicoPrep™ Capsules' with 'Standard PicoPrep™'

Doctor Evaluation Question	*Response*	*Hypertonic Solution and PicoPrep™ Capsules* (n=15) n (%)	*Standard PicoPrep™* (n=15) n (%)	*P-value*
Adequacy of cleansing	Excellent	5 (33)	5 (33)	NS
	Good	5 (33)	4 (27)	NS
	Fair	2 (13)	3 (20)	NS
	Poor	3 (20)	1 (7)	0.59
	Inadequate	0 (0)	0 (0)	NS
Missing data		0 (0)	2 (13)	

Table 12.1.5.1d Comparison of 'Hypertonic Solution and PicoPrep™ capsules' with 'Standard PicoPrep™' rating in specific bowel areas.

Bowel Preparation	Mean Rating for Specific Bowel Areas (out of 10)			
	Rectum	Transverse Colon	Caecum	Terminal Ileum
Hypertonic Solution and PicoPrep™ Capsules	8.60	8.60	6.33	8.13
Standard PicoPrep™	8.47	8.27	7.80	8.60
p-value	0.32	0.82	0.10	0.37

Table 12.1.5.1e Comparison of 'Hypertonic Solution and PicoPrep™ capsules' with 'Standard Glycoprep™'

Doctor Evaluation Question	*Response*	*Hypertonic Solution and PicoPrep™ Capsules* (n=15) n (%)	*Standard Glycoprep™* (n=14) n (%)	*P-value*
Adequacy of cleansing	Excellent	5 (33)	3 (21)	0.68
	Good	5 (33)	3 (21)	0.68
	Fair	2 (13)	5 (36)	0.21
	Poor	3 (20)	2 (14)	NS
	Inadequate	0 (0)	0 (0)	NS
Missing data		0 (0)	1 (7)	

Table 12.1.5.1f Comparison of 'Hypertonic Solution and PicoPrep™ capsules' with 'Standard Glycoprep™' rating in specific bowel areas

Bowel Preparation	Mean Rating for Specific Bowel Areas (out of 10)			
	Rectum	Transverse Colon	Caecum	Terminal Ileum
Hypertonic Solution and PicoPrep™ Capsules	8.60	8.60	6.33	8.13
Standard Glycoprep™	7.21	7.07	6.36	7.86
p-value	0.14	0.14	0.95	0.74

Table 12.1.5.1g Comparison of 'PicoPrep™ Capsules' and 'Standard PicoPrep™'

Doctor Evaluation Question	Response	PicoPrep™ Capsules (n=15) n (%)	Standard PicoPrep™ (n=15) n (%)	P-value
Adequacy of cleansing	Excellent	3 (20)	3 (21)	0.68
	Good	5 (33)	3 (21)	NS
	Fair	5 (33)	5 (36)	0.68
	Poor	1 (7)	2 (14)	NS
	Inadequate	1 (7)	0 (0)	NS
Missing data		0 (0)	1 (7)	

Table 12.1.5.1h Comparison of 'PicoPrep™ Capsules' and 'Standard PicoPrep™' rating in specific bowel areas

Bowel Preparation	Mean Rating for Specific Bowel Areas (out of 10)			
	Rectum	Transverse Colon	Caecum	Terminal Ileum
PicoPrep™ Capsules	7.00	6.86	5.93	8.42
Standard PicoPrep™	8.47	8.27	7.80	8.60
p-value	0.06	0.08	0.03	0.83

Table 12.1.5.1i Comparison of 'PicoPrep™ Capsules' and 'Standard Glycoprep™'

Doctor Evaluation Question	Response	PicoPrep™ Capsules (n=15) n (%)	Standard Glycoprep™ (n=14) n (%)	P-value
Adequacy of cleansing	Excellent	3 (20)	5 (33)	0.68
	Good	5 (33)	4 (27)	0.68
	Fair	5 (33)	3 (20)	NS
	Poor	1 (7)	1 (7)	NS
	Inadequate	1 (7)	0 (0)	NS
Missing data		0 (0)	2 (13)	

Table 12.1.5.1j Comparison of 'PicoPrep™ capsules' and 'Standard Glycoprep™' rating in specific bowel areas

Bowel Preparation	Mean Rating for Specific Bowel Areas (out of 10)			
	Rectum	Transverse Colon	Caecum	Terminal Ileum
PicoPrep™ Capsules	7.00	6.86	5.93	8.42
Standard Glycoprep™	7.21	7.07	6.36	7.86
p-value	0.46	0.82	0.49	0.55

12.1.6 Adverse Events

A. Comparison of 'Glycoprep™' with 'Hypertonic Solution and PicoPrep™ Capsules'

Adverse Events	*GS* (n = 14) n (%)	*HYPC* (n = 15) n (%)	*P values*
Moderate or severe adverse events			
Headache	1 (7.14)	4 (26.66)	0.17
Vomiting	1 (7.14)	0 (0.00)	-
Bloating	1 (7.14)	0 (0.00)	-
Mild adverse events			
Headache	4 (28.6)	4 (26.66)	-
Vomiting	1 (7.14)	0 (0.00)	-
Faint/Light headed	1 (7.14)	1 (6.66)	-
Total number of subjects reporting adverse events	**8 (57.14)**	**7 (46.66)**	

B. Comparison of 'Glycoprep™' with 'PicoPrep™ Capsules'

Adverse Events	*GS* (n = 14) n (%)	*PCA* (n = 16) n (%)	*P value*
Moderate or severe adverse events			
Headache	1 (7.14)	2 (12.50)	-
Nausea	0 (0.00)	1 (6.25)	-
Vomiting	1 (7.14)	2 (12.5)	-
Bloating	1 (7.14)	0 (0.00)	-
Faint/Light headed	0 (0.00)	1 (6.25)	-
Anal irritation	0 (0.00)	1 (6.25)	-
Mild adverse events			
Headache	4 (28.57)	1 (6.25)	0.33
Vomiting	1 (7.14)		-
Faint/Light headed	1 (7.14)		-
Total number of subjects reporting adverse events	**8 (57.14)**	**8 (50.00)**	

C. Comparison of 'Hypertonic Solution and PicoPrep™ Capsules' and 'PicoPrep™ Capsules'

Adverse Events	*HYPC* (n = 15) n (%)	*PCA* (n = 16) n (%)	*P value*
Moderate or severe adverse events			
Headache	4 (26.66)	2 (12.5)	0.39
Nausea	0 (0.00)	1 (6.25)	-
Vomiting	0 (0.00)	2 (13)	-
Faint/Light headed	0 (0.00)	1 (6.25)	-
Anal irritation	0 (0.00)	1 (6.25)	-
Mild adverse events			
Headache	4 (26.66)	1 (6.25)	0.16
Faint/Light headed	1 (6.66)	0 (0.00)	-
Total number of subjects reporting adverse events	**7 (46.66)**	**8 (50.00)**	

D. Comparison of 'PicoPrep™ Sachets' with 'Hypertonic Solution and PicoPrep™ Capsules'

Adverse Events	*PS* (n = 14) n (%)	*HYPC* (n = 15) n (%)	*P value*
Moderate or severe adverse events			
Headache	1 (7.14)	4 (26.66)	0.32
Vomiting	1 (7.14)	0 (0.00)	-
Faint/Light headed	2 (15.38)	0 (0.00)	0.48
Hyperventilating	1 (7.14)	0 (0.00)	-
Tremor	1 (7.14)	0 (0.00)	-
Mild adverse events			
Headache	4 (28.57)	4 (26.66)	-
Faint/Light headed	0 (0.00)	1 (6.66)	-
Bloating	1 (7.14)	0 (0.00)	-
Dry mouth	1 (7.14)	0 (0.00)	-
Total number of subjects reporting adverse events	**7 (41.17)**	**7 (46.66)**	

E. Comparison of 'PicoPrep™ Sachets' with 'PicoPrep™ Capsules'

Adverse Events	*PS* (n = 14) n (%)	*PCA* (n = 16) n (%)	*P value*
Moderate or severe adverse events			
Headache	1 (7.14)	2 (12.50)	-
Nausea	0 (0.00)	1 (6.25)	-
Vomiting	1 (7.14)	2 (12.50)	-
Faint/Light headed	2 (13.28)	1 (6.25)	-
Hyperventilating	1 (7.14)	0 (0.00)	-
Tremor	1 (7.14)		-
Anal irritation	0 (0.00)	1 (6.25)	-
Mild adverse events			
Headache	4 (28.57)	1 (6.25)	0.17
Bloating	1 (7.14)		-
Dry mouth	1 (7.14)		-
Total number of subjects reporting adverse events	**7 (50.00)**	**8 (50.00)**	

12.1.7 List of Drug Batches per Subject

Patient Number	Preparation Dispensed at Visit 1	Batch Nos.
101	PicoPrep™ Capsules	B0136N, B11181
102	PicoPrep™ Capsules	B0136N, B11181
103	Standard Glycoprep™	B30112
104	Standard PicoPrep™	B30531
105	Standard PicoPrep™	B30531
106	Standard Glycoprep™	B30112
107	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181
108	Standard Glycoprep™	B30112
109	Standard PicoPrep™	B30531
110	PicoPrep™ Capsules	B0136N, B11181
111	PicoPrep™ Capsules	B0136N, B11181
112	Standard PicoPrep™	B30531
113	Standard Glycoprep™	B30112
114	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181
115	Standard Glycoprep™	B30112
116	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181, C0804
117	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181, C0804
118	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181
119	Standard Glycoprep™	B30112
120	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181
121	Standard Glycoprep™	B30112
122	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181
123	Standard Glycoprep™	B30112
124	PicoPrep™ Capsules	B0136N, B11181
125	PicoPrep™ Capsules	B0136N, B11181
126	PicoPrep™ Capsules	B0136N, B11181
127	Standard Glycoprep™	B30112
128	PicoPrep™ Capsules	B0136N, B11181
129	PicoPrep™ Capsules	B0136N, B11181
130	Standard PicoPrep™	B30531
131	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181, C0804
132	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181, C0804
133	Standard PicoPrep™	B30531
134	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181, C0804
135	PicoPrep™ Capsules	B0136N, B11181

Patient Number	Preparation Dispensed at Visit 1	Batch Nos.
136	Standard Glycoprep™	B30112
137	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181, C0804
138	PicoPrep™ Capsules	B0136N, B11181
139	PicoPrep™ Capsules	B0136N, B11181
140	Standard PicoPrep™	B30531
141	Standard PicoPrep™	B30531
142	Standard PicoPrep™	B30531
143	Standard PicoPrep™	B30531
144	PicoPrep™ Capsules	B0136N, B11181
145	Standard PicoPrep™	B30531
146	Standard Glycoprep™	B30112
147	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181, C0804
148	Standard Glycoprep™	B30112
149	Standard PicoPrep™	B30531
150	PicoPrep™ Capsules	B0136N, B11181
151	Standard Glycoprep™	B30112
152	Standard PicoPrep™	B30531
153	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181, C0804
154	Standard PicoPrep™	B30531
155	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181, C0804
156	PicoPrep™ Capsules	B0136N, B11181
157	Standard Glycoprep™	B30112
158	PicoPrep™ Capsules	B0136N, B11181
159	Hypertonic Solution and PicoPrep™ Capsules	B0136N, B11181, C0804
160	Standard Glycoprep™	B30112
161	Standard Glycoprep™	B30899
162	PicoPrep™ Capsules	B0136N, B11181

12.1.8 Individual Subject Laboratory Results

Table 12.1.8.1: Full Blood Count Values per Subject

	Haemoglobin (120 - 160 g/L)		Haematocrit (0.370 - 0.470)		Erythrocytes (RBC) (3.74 - 5.16 *10 12/L)		Leucocytes (WBC) (4.0 - 11.0 *10 9/L)		Platelets (PTLC) (150 - 400 *10 9/L)	
Patient No.	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**
101	138	141	0.426	0.438	4.65	4.77	7.7	6.6	337	337
102	148	144	0.435	0.419	4.57	4.41	9.2	7.6	284	285
103	160	*166**	0.447	*0.473**	4.76	5.01	5.0	5.0	206	239
104	162	160	0.464	0.458	5.15	5.19	8.1	6.5	184	158
105	139	143	0.409	0.416	4.30	4.49	4.1	4.8	211	224
106	134	133	0.41	0.41	4.80	4.82	7.0	7.3	306	266
107	135	142	0.421	0.437	4.40	4.57	5.5	5.0	310	303
108	157	140	0.458	0.405	5.11	4.58	*3.6**	4.3	151	*132**
109	133	1389	0.407	0.410	4.36	4.44	6.1	4.8	278	210
110	174	164	0.489	0.471	5.55	5.35	5.3	4.7	*119**	*116**
111	131	133	0.391	0.399	4.33	4.48	4.5	5.5	269	200
112	152	150	0.443	0.437	4.98	4.91	10.0	7.7	304	274
113	160	160	0.450	0.452	5.38	5.34	7.8	7.8	232	216
114	160	155	0.450	0.437	4.82	4.66	4.5	*3.7**	202	200
115	158	155	0.484	0.465	5.40	5.25	5.7	5.2	226	186
116	149	152	0.446	0.453	4.89	5.02	6.5	4.4	242	229
117	143	140	0.429	0.418	4.49	4.42	7.9	6.5	265	221
118	144	141	0.444	0.429	4.94	4.87	5.1	5.3	126	187
119	152	145	0.447	0.431	5.28	5.09	4.8	80	220	215
120	119	122	0.365	0.377	4.34	4.46	5.3	4.3	429	385
121	133	N/A	0.402	N/A	4.12	N/A	7.2	N/A	316	N/A
122	134	145	0.396	0.437	4.37	4.38	6.3	5.1	215	208
123	125	*119**	0.381	*0.365**	4.06	3.86	*13.1**	8.5	*451**	399
124	*112**	*118**	*0.358**	0.371	*5.88**	*6.14**	9.1	9.3	366	347
125	166	169	0.491	0.494	5.45	5.53	8.6	6.2	200	184
126	131	136	0.396	0.410	4.32	4.51	6.5	7.0	196	172
127	133	133	0.426	0.419	4.74	4.75	9.8	9.9	255	212
128	144	145	0.421	0.421	4.55	4.52	9.8	7.1	226	220
129	151	143	0.442	0.420	4.80	4.55	5.1	4.0	219	185
130	143	129	0.425	0.387	4.71	4.29	4.7	5.0	307	258
131	153	152	*0.476**	0.459	5.96	*5.79**	7.7	6.6	256	239
132	140	138	0.412	0.417	4.35	4.36	4.9	4.3	211	216
133	120	125	0.371	0.397	3.97	4.29	5.7	5.3	190	172

	Haemoglobin (120 - 160 g/L)		Haematocrit (0.370 - 0.470)		Erythrocytes (RBC) (3.74 - 5.16 *10 12/L)		Leucocytes (WBC) (4.0 - 11.0 *10 9/L)		Platelets (PTLC) (150 - 400 *10 9/L)	
Patient No.	Baseline	Visit 2	Baseline	Visit 2	Baseline	Visit 2	Baseline	Visit 2	Baseline	Visit 2
134	150	152	0.455	0.452	4.81	4.89	5.7	4.3	222	218
135	157	158	0.468	0.477	5.22	5.20	5.7	6.2	257	254
136	132	131	0.395	0.398	4.45	4.42	6.7	6.4	259	229
137	156	159	0.466	*0.475**	4.59	4.70	6.1	5.4	198	190
138	135	133	0.410	0.393	4.28	4.19	4.1	*3.9**	192	177
139	138	139	0.426	0.428	4.48	4.54	*3.9**	*3.9**	304	290
140	131	132	0.409	0.414	4.12	4.15	5.3	5.1	270	254
141	128	130	0.394	0.396	4.44	4.49	*3.7**	*3.5**	254	242
142	129	121	0.413	0.395	4.90	4.66	6.9	5.1	251	215
143	131	135	0.411	0.416	4.48	4.54	*3.6**	*3.8**	276	265
144	130	141	0.403	0.422	4.47	4.77	7.3	4.9	225	212
145	128	124	0.382	*0.343**	4.02	3.89	5.2	6.2	227	191
146	143	139	0.439	0.414	4.41	4.22	8.6	*13.1**	308	292
147	128	135	0.391	0.412	418	4.44	6.2	5.5	235	227
148	169	161	*0.522**	0.496	5.51	5.23	6.3	6.2	163	155
149	129	136	0.388	0.410	4.41	4.62	6.8	6.6	329	324
150	165	165	0.482	0.498	5.42	5.46	4.5	5.4	N/A	N/A
151	131	129	0.411	0.394	4.40	4.27	4.1	4.6	262	231
152	154	147	0.470	0.440	4.92	4.67	6.3	6.1	343	340
153	136	144	0.432	0.469	4.89	*5.23**	8.6	5.9	292	307
154	128	125	0.398	0.409	4.09	4.02	6.2	4.9	287	256
155	168	161	0.500	0.477	*5.62**	5.37	5.8	5.9	214	197
156	146	157	0.434	0.464	4.88	5.30	7.7	8.8	303	262
157	127	133	0.382	0.396	4.30	4.48	8.0	8.2	238	223
158	156	155	0.463	0.449	5.07	4.94	5.8	4.6	198	157
159	156	159	N/A	0.459	N/A	4.85	8.0	6.5	N/A	149
160	152	N/A	0.466	N/A	5.72	N/A	7.5	N/A	219	N/A
161	140	135	0.447	0.434	5.53	5.45	4.8	4.5	328	313
162	144	150	0.435	0.459	4.63	4.88	6.4	3.7	225	187

* Out of normal range. Not clinically significant

Table 12.1.8.2: Biochemistry Values per Subject

	Sodium (135 – 150 mmol/L)		Potassium (3.25 – 5.0 mmol/L)		Chloride (95 – 110 mmol/L)		Urea (3.6 – 9.3 mmol/L)		Creatinine (0.06 – 0.12 mmol/L)		Calcium (2.10–2.65 mmol/L)		Phosphate (0.80-1.50 mmol/L)	
Patient No.	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**
101	140	141	4.7	4.6	101	99	5.9	6.1	0.086	0.091	2.27	2.26	1.01	1.06
102	142	143	3.6	4.1	104	105	5.1	4.0	0.080	0.071	2.35	2.12	1.12	0.91
103	139	140	3.9	4.7	102	100	7.7	5.3	0.082	0.078	2.24	2.20	0.93	1.25
104	139	137	4.5	4.2	102	101	7.0	4.9	0.110	0.099	2.43	2.32	1.09	0.97
105	137	136	4.2	4.0	103	100	*2.8**	*3.4**	*0.058**	0.065	2.34	2.31	1.16	1.15
106	139	140	3.7	3.8	103	102	2.5	2.6	0.080	0.080	2.47	2.43	1.12	1.01
107	141	142	4.1	3.8	103	104	6.4	5.7	*0.056**	*0.056**	2.36	2.31	1.06	1.03
108	139	142	4.0	4.3	102	101	5.8	3.7	0.086	0.080	2.53	2.32	0.95	0.82
109	141	137	4.7	4.5	101	102	6.1	4.4	0.069	0.066	2.50	2.44	1.25	1.11
110	138	141	4.4	4.2	102	104	5.7	4.6	0.089	0.074	2.33	2.14	0.82	0.80
111	138	141	4.2	3.8	105	106	5.2	*3.2**	0.069	0.066	2.39	2.34	1.26	1.18
112	139	141	4.5	4.7	102	104	5.5	5.3	0.080	0.074	2.43	2.19	1.38	1.06
113	141	140	4.1	4.2	102	100	4.7	5.5	0.089	0.084	2.39	2.30	1.01	1.04
114	138	141	4.6	4.2	101	103	6.3	4.1	0.082	0.067	2.55	2.45	1.22	1.12
115	140	143	4.8	4.1	105	109	7.4	6.6	0.109	0.105	2.26	2.24	1.33	1.20
116	144	142	3.6	3.5	106	106	4.1	*2.0**	*0.055**	*0.051**	2.34	2.34	1.25	1.00
117	140	138	3.9	3.6	101	104	4.7	3.6	*0.059**	*0.043**	2.21	*2.00**	1.13	1.05
118	142	144	4.3	3.8	106	106	7.5	6.6	0.065	*0.061**	2.47	2.40	1.05	1.02
119	143	139	4.2	3.7	106	102	7.6	5.1	0.074	0.071	2.41	2.29	1.17	1.10
120	137	138	4.5	4.4	107	106	*3.4**	*2.5**	0.064	0.065	2.27	2.13	1.06	1.02
121	144	N/A	4.1	N/A	105	N/A	5.1	N/A	*0.054**	N/A	2.38	N/A	1.47	N/A
122	140	140	4.1	4.2	102	100	6.3	4.2	0.074	0.079	2.35	2.24	1.21	1.08

	Sodium (135 – 150 mmol/L)		Potassium (3.25 – 5.0 mmol/L)		Chloride (95 – 110 mmol/L)		Urea (3.6 – 9.3 mmol/L)		Creatinine (0.06 – 0.12 mmol/L)		Calcium (2.10–2.65 mmol/L)		Phosphate (0.80-1.50 mmol/L)	
Patient No.	Baseline	Visit 2	Baseline	Visit 2	Baseline	Visit 2	Baseline	Visit 2	Baseline	Visit 2	Baseline	Visit 2	Baseline	Visit 2
123	140	137	4.4	4.6	105	104	3.8	*3.8*	*0.056**	*0.049**	2.32	2.30	1.36	1.33
124	139	141	4.0	4.7	104	105	5.4	4.8	0.066	0.073	2.32	2.31	1.07	1.08
125	141	140	4.2	4.0	108	105	8.7	5.4	0.098	0.088	2.41	2.40	1.02	0.91
126	140	143	4.1	4.5	105	106	5.4	44	*0.058**	0.066	2.38	2.34	1.29	1.04
127	138	142	4.5	3.7	103	107	5.9	3.7	0.062	0.062	2.30	2.40	1.19	1.02
128	141	138	4.3	4.5	106	101	5.2	*3.4**	0.075	0.085	2.28	2.28	0.82	0.97
129	138	139	4.5	4.4	103	106	5.3	3.8	0.079	0.076	2.43	2.27	1.11	0.80
130	139	140	4.4	4.2	104	106	6.3	5.1	0.077	0.071	2.41	2.31	1.24	1.20
131	141	138	4.3	4.0	101	100	7.4	4.7	0.088	0.083	2.28	2.21	1.01	0.98
132	140	141	3.8	3.9	105	107	78	4.8	0.094	0.079	2.15	*2.03**	0.88	0.98
133	141	140	4.4	4.0	105	102	5.0	4.7	*0.058**	0.071	2.37	2.32	1.18	1.11
134	140	139	3.6	4.2	102	104	8.0	5.0	0.080	0.078	2.37	2.24	1.16	1.23
135	138	141	4.4	3.6	103	102	6.7	6.0	0.082	0.092	2.49	2.38	0.90	0.88
136	141	139	4.1	3.9	104	103	5.9	3.5	0.073	0.069	2.36	2.36	1.25	1.21
137	142	139	3.9	4.2	106	106	5.1	*2.6**	0.095	0.093	2.44	2.37	*0.77**	1.00
138	144	138	4.0	3.7	103	100	7.0	4.5	0.103	0.066	2.40	2.39	1.26	1.34
139	143	141	4.2	3.6	110	107	7.2	6.1	*0.053**	*0.059**	2.32	2.32	1.21	1.00
140	141	144	4.2	4.2	108	106	6.6	4.3	0.066	0.074	2.39	2.30	1.07	1.16
141	140	142	4.7	3.7	102	102	5.3	3.8	0.083	0.082	2.58	2.40	1.32	1.25
142	141	144	4.3	4.2	106	105	5.1	4.2	0.072	0.070	2.49	2.34	1.36	1.08
143	142	142	4.1	4.3	104	104	*3.3**	*2.7**	0.066	*0.059**	2.32	2.20	1.30	1.19
144	140	136	3.9	3.5	101	99	4.8	*2.9**	*0.056**	*0.056**	2.25	2.29	1.19	1.30
145	137	*121**	3.5	*3.3**	98	*85**	*2.6**	*2.9**	*0.055**	*0.040**	2.32	2.13	1.12	0.88
146	143	143	4.2	4.2	103	104	3.9	3.9	*0.056**	*0.049**	2.41	2.26	1.15	1.22
147	140	139	4.5	4.4	106	105	5.4	*2.3**	0.069	0.071	2.35	2.15	1.15	1.10

	Sodium (135 – 150 mmol/L)		Potassium (3.25 – 5.0 mmol/L)		Chloride (95 – 110 mmol/L)		Urea (3.6 – 9.3 mmol/L)		Creatinine (0.06 – 0.12 mmol/L)		Calcium (2.10–2.65 mmol/L)		Phosphate (0.80-1.50 mmol/L)	
Patient No.	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**
148	137	141	3.9	4.4	102	102	*2.8**	*2.7**	0.086	0.084	2.34	2.29	0.89	1.04
149	138	140	3.7	*3.2**	99	101	3.8	*2.9**	*0.042**	*0.052**	2.28	2.29	0.80	1.15
150	140	141	4.3	4.2	103	103	5.2	3.8	0.079	0.084	2.24	2.25	1.09	1.04
151	145	140	4.7	3.4	105	104	5.7	4.1	*0.054**	*0.053**	2.41	2.20	1.21	1.16
152	140	139	4.6	44	101	104	5.7	3.7	0.081	0.079	2.36	2.21	1.13	1.07
153	144	140	4.0	4.1	105	104	4.5	3.8	0.067	0.066	2.48	2.46	1.33	1.19
154	141	145	4.3	4.0	104	109	4.6	3.8	0.061	*0.054**	2.31	2.29	1.13	0.86
155	138	140	4.4	4.1	100	102	5.1	4.7	0.099	0.095	2.35	2.34	0.94	0.92
156	138	139	4.1	3.8	102	100	6.1	6.5	0.093	0.099	2.41	2.28	1.15	1.05
157	140	139	3.8	4.5	105	102	4.4	6.6	0.068	0.061	2.46	2.27	1.10	1.17
158	139	141	4.3	4.1	102	106	8.9	6.5	0.098	0.048	2.34	2.36	1.10	1.19
159	*121**	143	N/A	4.0	96	104	6.9	6.3	0.101	0.084	*1.54**	2.21	1.32	N/A
160	137	N/A	3.9	N/A	103	N/A	6.0	N/A	0.088	N/A	2.30	N/A	1.02	N/A
161	142	138	4.4	4.4	105	100	7.5	5.1	0.115	0.109	2.44	2.31	*0.71**	0.94
162	137	140	4.6	4.2	100	104	7.6	4.0	0.060	0.072	2.52	2.41	1.35	1.28

* Out of normal range. Not clinically significant

Table 12.1.8.3: Biochemistry Values (cont.) per Subject

	Bilirubin (0 - 17 umol/L)		Alk Phosphate (30 – 115 U/L)		ALT (5 – 40 U/L)		AST (5 – 40 U/L)		GGT (< 66 U/L)		Magnesium (0.7 – 1.0 mmol/L)		Glucose (3.3 – 7.8 mmol/L)	
Patient No.	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**
101	8	9	61	63	27	25	17	19	31	28	0.9	1.0	*5.9**	5.3
102	11	13	58	56	22	24	19	21	23	20	0.9	N/A	5.6	4.4
103	15	23	72	63	21	28	18	37	13	10	0.8	0.9	6.4	4.6
104	12	22	66	71	25	35	19	29	35	31	1.0	*1.1**	4.5	4.7
105	15	9	45	50	10	13	18	19	9	12	*1.1**	0.8	4.0	4.3
106	5	10	81	84	11	14	19	23	16	*12*	0.94	0.92	4.4	4.1
107	8	13	92	97	10	10	*19*	*19*	10	11	0.9	*1.1**	4.6	4.7
108	17	12	76	69	20	19	21	23	25	17	1.0	0.9	4.8	4.5
109	9	*23**	91	71	16	18	19	23	18	16	0.8	0.9	4.6	4.6
110	13	*21**	81	68	*54**	36	31	32	33	27	0.9	1.0	*9.1**	4.1
111	12	16	62	63	*78**	*93**	32	40	25	24	0.9	*1.1**	5.0	4.7
112	5	9	62	60	12	15	16	21	16	*15*	0.9	1.0	4.6	4.0
113	16	*45**	55	49	33	31	24	25	19	17	0.9	1.0	5.1	3.4
114	17	15	78	71	33	27	34	27	20	18	1.0	1.0	3.5	4.4
115	13	16	48	49	*47**	*47**	38	37	17	19	1.0	1.0	4.8	4.2
116	12	*18**	72	65	25	22	27	27	13	14	0.8	*1.1**	4.4	4.6
117	10	17	43	35	18	18	17	19	12	13	0.9	*1.1**	4.6	3.8
118	9	14	73	71	24	18	28	26	14	13	0.9	0.9	4.8	4.1
119	8	*20**	66	70	18	15	19	18	21	19	0.8	N/A	4.3	4.2
120	5	9	63	67	18	20	19	22	10	10	0.7	0.9	3.3	4.3
121	5	N/A	81	N/A	43	N/A	25	N/A	62	N/A	0.9	N/A	3.7	N/A
122	7	43	45	52	21	23	19	26	23	21	0.9	1.0	4.8	4.5
123	3	7	75	65	26	*25*	18	21	29	*23*	0.8	0.8	4.3	3.0
124	11	17	66	64	13	7	20	22	9	8	N/A	1.0	4.1	4.1
125	8	17	80	84	*48**	*55**	29	32	23	23	0.9	1.0	4.3	4.7

126	5	10	65	68	26	25	19	18	32	28	N/A	1.0	5.6	4.1
127	14	*36**	58	58	15	11	19	21	8	9	0.9	0.9	5.1	4.0
128	12	16	82	80	15	13	23	23	13	16	0.9	1.0	5.1	4.4
129	6	11	52	52	*45**	34	23	25	41	32	1.0	1.0	5.1	5.0
130	10	9	63	56	8	8	14	13	13	10	0.9	1.0	4.2	4.6
131	13	*20**	63	66	27	30	22	30	23	22	0.8	1.0	4.9	4.4
132	6	11	67	51	24	25	27	33	20	17	0.8	1.0	5.0	4.8
133	6	12	55	66	22	18	25	21	18	16	0.8	0.9	4.8	3.8
134	8	15	41	30	23	28	24	28	46	47	0.8	0.9	6.1	5.3
135	13	*23**	114	*117**	36	30	33	31	*442**	*424**	0.8	0.9	4.6	4.1
136	9	16	93	923	17	18	22	25	18	16	0.8	0.8	3.4	4.5

* Out of normal range. Not clinically significant

Table 12.1.8.4: Serum Osmolality Values per Subject per Arm

Glycoprep			Hypertonic			Picoprep Sachets			PicoPrep Capsules		
Pt No.	**V1**	**V2**	**Pt No.**	**V1**	**V2**	**Pt No.**	**V1**	**V2**	**Pt No.**	**V1**	**V2**
103	284	286	107	287	290	104	295	285	101	295	295
106	285	285	114	289	286	105	288	284	102	297	294
108	288	288	116	279	286	109	285	282	110	290	298
113	298	294	117	286	285	112	299	292	111	295	289
115	295	292	118	291	288	130	285	288	124	296	290
119	301	284	120	286	280	133	299	316	125	289	293
121	N/A	N/A	122	297	293	140	298	299	126	286	294
123	283	282	131	294	298	141	289	283	128	292	296
127	289	289	132	300	288	142	298	302	129	287	303
136	301	297	134	287	278	143	281	286	135	292	296
146	293	280	137	297	287	145	280	256	138	N/A	N/A
148	288	292	147	298	292	149	284	Not Available	139	300	288
151	296	291	153	288	295	152	295	299	144	306	288
157	284	302	155	296	288	154	293	289	150	287	289
160	N/A	N/A	159	309	288				156	293	287
161	304	288							158	303	289
									162	285	294
Mean	**292.07**	**289.29**		**292.27**	**288.13**		**290.64**	**289.31**		**293.31**	**292.69**
St Dev	**7.16**	**5.95**		**7.44**	**5.18**		**6.88**	**13.94**		**6.12**	**4.41**

Table 12.1.8.5: Urinalysis Values per Subject

	Sodium (35-180 mmol/L)		Potassium (25-75 mmol/L)		Chloride (122-135 mmol/L)		Osmolarity (100-800 mmol/Kg)		Specific Gravity (1.005 – 1.030)	
Patient Number	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**	**Baseline**	**Visit 2**
101	110	62	31	*120**	*112**	N/A	693	693	1.019	1.012
102	N/A	N/A	N/A	N/A	N/A	N/A	*899**	742	1.024	1.023
103	N/A	N/A	N/A	N/A	N/A	N/A	525	663	1.013	1.021
104	N/A	*4**	N/A	*2**	N/A	N/A	*50**	695	*1.001**	N/A
105	*28**	82	44	11	*24**	103	368	680	1.012	1.021
106	*15**	37	*17**	*12**	*21**	*30**	*97**	189	*1.003**	1.006
107	66	140	46	*16**	*80**	*136**	432	503	1.011	1.013
108	91	120	*116**	27	*114**	*94**	718	369	1.020	1.010
109	66	40	*113**	3	*83**	*40**	799	210	1.025	1.006
110	117	146	*136**	53	*152**	*119**	*878**	583	1.024	1.015
111	127	145	*86**	*90**	*145**	*165**	669	610	1.017	1.015
112	99	51	*82**	29	*114**	*51**	*820**	359	1.026	1.010
113	136	159	66	53	*147**	N/A	698	*1034**	1.026	1.029
114	82	58	*93**	62	132	*91**	567	377	1.014	1.010
115	80	66	*93**	*184**	*113**	*78**	*1052**	*1094**	*1.031**	*1.034**
116	36	22	26	35	*50**	N/A	281	324	1.007	1.010
117	66	41	*24**	*16**	*65**	*50**	342	221	1.010	1.007
118	125	39	*81**	45	*153**	*42**	675	600	1.017	1.019
119	146	115	*114**	51	*216**	*105**	*947**	499	1.024	1.013
120	130	96	*76**	54	*181**	125	*811**	627	1.023	1.018
121	179	N/A	*89**	N/A	*173**	N/A	*1058**	N/A	1.029	N/A
122	107	*18**	*76**	*18**	*139**	*20**	572	155	1.014	*1.004**
123	174	*228**	52	23	*201**	*83**	*954**	*912**	1.027	1.025
124	179	124	*89**	32	*173**	*54**	*1058**	659	1.029	1.020
125	141	80	62	*21**	*138**	*51**	754	434	1.019	1.013
126	115	82	65	64	130	94	662	681	1.017	1.019
127	94	40	*90**	*13**	*121**	*19**	598	159	1.016	*1.004**
128	110	75	*122**	*117**	*149**	*58**	*816**	477	1.022	1.013
129	61	143	*78**	*21**	N/A	N/A	485	619	1.012	1.017
130	91	95	41	39	127	N/A	*853**	*1062**	1.023	1.030
131	43	124	*98**	39	*82**	*110**	*839**	492	1.024	1.012
132	83	101	39	39	*91**	*88**	514	375	1.013	1.010
133	41	90	*11**	*13**	*35**	*59**	161	540	*1.003**	1.016

	Sodium (35-180 mmol/L)		Potassium (25-75 mmol/L)		Chloride (122-135 mmol/L)		Osmolarity (100-800 mmol/Kg)		Specific Gravity (1.005 – 1.030)	
Patient Number	Baseline	Visit 2	Baseline	Visit 2	Baseline	Visit 2	Baseline	Visit 2	Baseline	Visit 2
134	112	43	*97**	*108**	*175**	*46**	*963**	675	1.027	1.024
135	53	64	44	*24**	*66**	*35**	630	617	1.019	1.019
136	50	*201**	35	52	*55**	*88**	474	709	1.013	1.021
137	94	52	*84**	48	*121**	46	*993**	357	1.024	1.010
138	51	N/A	*111**	N/A	*73**	N/A	656	N/A	1.019	N/A
139	141	228	*239**	17	*280**	N/A	*1091**	262	N/A	1.020
140	46	89	*103**	40	*57**	*76**	*931**	415	1.027	1.011
141	42	18	*86**	*7**	*73**	*20**	645	179	1.019	1.005
142	72	134	*217**	33	133	*99**	785	501	1.023	1.014
143	63	133	30	*89**	*72**	*113**	315	616	1.009	1.015
144	41	18	47	*2**	*63**	*8**	337	*72**	1.008	*1.002**
145	*9**	42	36	72	*23**	*19**	156	550	1.005	1.017
146	161	207	*140**	214	*152**	*123*	*947**	924	1.027	1.027
147	158	37	*130**	28	*221**	*46**	*1012**	216	1.026	1.006
148	96	158	*24**	51	*96**	*118**	337	603	1.008	1.016
149	166	67	*87**	21	*230**	29	681	N/A	1.016	N/A
150	138	65	50	*15**	*211**	*55**	781	341	1.019	1.009
151	169	131	*110**	42	*193**	*38**	*1061**	662	1.027	1.020
152	92	*23**	*93**	*10**	*101**	*27**	662	244	1.018	1.007
153	106	*22**	54	*4**	*137**	*16**	654	110	1.020	*1.003**
154	38	74	45	19	*39**	*83**	348	349	1.010	1.010
155	46	85	69	38	*104**	*76**	*584*	682	1.017	1.021
156	118	35	*85**	*22**	*162**	N/A	*876**	537	1.023	1.015
157	*41**	96	*10**	43	*41**	N/A	170	658	*1.004**	1.021
158	131	175	*111**	*13**	*165**	*120**	*922**	*875**	1.024	1.023
159	137	156	44	86	*110**	132	586	*927**	1.016	1.026
160	156	N/A	*86**	N/A	132	N/A	*927**	N/A	1.026	N/A
161	49	86	30	27	*57**	*57**	397	315	1.011	1.008
162	59	101	33	*21**	65*	*109**	306	424	1.007	1.012

12.1.9 Relevant Medical History of eligible subjects

Patient Number	Initials	Date Of Birth	Consent	Enrolled	Arm	Completion Status	Relevant Medical History
101	G-R	09/08/47	17/07/03	Yes	PicoPrep™ Capsules	Completed	IBS, polyps
102	R-R	18/01/52	17/07/03	Yes	PicoPrep™ Capsules	Completed	Haemorrhoids
103	YSA	26/07/50	17/07/03	Yes	Standard Glycoprep™	Completed	Constipation
104	T-D	08/08/46	22/07/03	Yes	Standard PicoPrep™	Completed	Haemorrhoids, GORD
105	KCF	26/04/75	24/07/03	Yes	Standard PicoPrep™	Completed	Crohn's disease
106	S-V	19/03/64	06/08/03	Yes	Standard Glycoprep™	Completed	Nil
107	T-C	25/01/44	06/08/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Nil
108	F-L	23/05/42	07/08/03	Yes	Standard Glycoprep™	Completed	Nil
109	M-T	30/04/44	07/08/03	Yes	Standard PicoPrep™	Completed	Diverticular disease, polyps
110	R-G	23/08/53	12/08/03	Yes	PicoPrep™ Capsules	Completed	Gastritis
111	BRH	03/09/63	14/08/03	Yes	PicoPrep™ Capsules	Completed	Acute diverticulitis, colitis
112	G-C	02/03/63	14/08/03	Yes	Standard PicoPrep™	Completed	Colonic polyps
113	R-S	26/09/71	14/08/03	Yes	Standard Glycoprep™	Completed	D-IBS
114	KGT	28/05/76	15/08/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	GORD
115	N-L	22/05/45	18/08/03	Yes	Standard Glycoprep™	Completed	Constipation
116	A-P	07/07/77	18/08/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Polyps
117	B-D	31/10/56	18/08/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Diarrhoea
118	JEP	12/02/38	11/09/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Diarrhoea
119	R-W	11/01/61	11/09/03	Yes	Standard Glycoprep™	Completed	Polyps
120	BAW	31/01/60	12/09/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Polyps

Patient Number	Initials	Date Of Birth	Consent	Enrolled	Arm	Completion Status	Relevant Medical History
121	MAM	30/04/70	12/09/03	Yes	Standard Glycoprep™	Delayed Exclusion	Constipation
122	SGD	22/01/56	17/09/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Haemorrhoids
123	DKH	28/07/76	17/09/03	Yes	Standard Glycoprep™	Completed	Diarrhoea
124	M-A	05/01/59	17/09/03	Yes	PicoPrep™ Capsules	Completed	Diarrhoea
125	G-W	04/10/45	17/09/03	Yes	PicoPrep™ Capsules	Completed	Nil
126	AMM	19/12/62	17/09/03	Yes	PicoPrep™ Capsules	Completed	Constipation
127	SJE	27/04/54	19/09/03	Yes	Standard Glycoprep™	Completed	Haemorrhoids
128	ADW	03/10/56	13/10/03	Yes	PicoPrep™ Capsules	Completed	Constipation dominant IBS
129	P-H	10/06/58	16/10/03	Yes	PicoPrep™ Capsules	Completed	Polyps
130	J-S	31/07/81	31/10/03	Yes	Standard PicoPrep™	Completed	Crohn's disease
131	F-T	01/01/63	06/11/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Polyps/adenoma
132	KHL	24/12/44	07/11/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Sigmoid carcinoma
133	JCE	28/03/57	19/01/04	Yes	Standard PicoPrep™	Completed	Anal fissure
134	M-M	20/09/38	19/01/04	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Diverticular disease, polyps
135	PEB	30/04/56	20/01/04	Yes	PicoPrep™ Capsules	Completed	Ulcerative colitis, pseudo-polyps
136	FAW	25/07/54	06/02/04	Yes	Standard Glycoprep™	Completed	Haemorrhoids
137	RSM	29/01/72	06/02/04	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Nil
138	GMC	25/07/44	06/02/04	Yes	PicoPrep™ Capsules	Withdrawn	Polyps
139	AEN	22/04/42	09/02/04	Yes	PicoPrep™ Capsules	Completed	Haemorrhoids, polyps
140	RCW	02/01/52	12/02/04	Yes	Standard PicoPrep™	Completed	Colonic polyps
141	C-W	14/04/60	12/02/04	Yes	Standard PicoPrep™	Completed	IBS
142	G-F	30/03/43	12/02/04	Yes	Standard PicoPrep™	Completed	Nil

Patient Number	Initials	Date Of Birth	Consent	Enrolled	Arm	Completion Status	Relevant Medical History
143	MFB	14/09/70	19/02/04	Yes	Standard PicoPrep™	Completed	IBS, haemorrhoids
144	M-V	21/08/67	19/02/04	Yes	PicoPrep™ Capsules	Completed	Polyps
145	B-W	06/03/52	19/02/04	Yes	Standard PicoPrep™	Completed	Haemorrhoids
146	JAK	28/03/84	20/02/04	Yes	Standard Glycoprep™	Completed	Fissure
147	P-F	02/04/67	20/02/04	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Polyps
148	SJW	23/04/71	05/03/04	Yes	Standard Glycoprep™	Completed	IBS, diarrhoea
149	D-C	26/05/67	11/03/04	Yes	Standard PicoPrep™	Completed	Ulcerative colitis, diarrhoea
150	G-C	05/11/47	11/03/04	Yes	PicoPrep™ Capsules	Completed	Nil
151	S-A	06/12/72	12/03/04	Yes	Standard Glycoprep™	Completed	Nil
152	PGB	10/03/52	15/03/04	Yes	Standard PicoPrep™	Completed	Polyps
153	AMG	05/11/35	19/03/04	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Diarrhoea
154	P-Q	13/06/49	19/03/04	Yes	Standard PicoPrep™	Completed	Haemorrhoids
155	M-R	04/12/62	26/03/04	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Nil
156	RST	14/03/50	29/03/04	Yes	PicoPrep™ Capsules	Completed	GORD
157	C-A	16/12/74	31/03/04	Yes	Standard Glycoprep™	Completed	Nil
158	EWP	08/10/52	07/04/04	Yes	PicoPrep™ Capsules	Completed	Nil
159	D-B	10/04/46	08/04/04	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Nil
160	A-G	01/02/61	14/04/04	Yes	Standard Glycoprep™	Withdrawn	n/a
161	GRN	21/08/49	19/04/04	Yes	Standard Glycoprep™	Completed	Nil
162	M-A	11/05/59	30/04/04	Yes	PicoPrep™ Capsules	Completed	Crohn's disease, haemorrhoids, anal fissure

12.2.10: Baseline Complaints as reported separately to Medical History

Patient Number	Initials	Date Of Birth	Consent	Enrolled	Arm	Completion Status	Baseline symptoms
101	G-R	09/08/47	17/07/03	Yes	PicoPrep™ Capsules	Completed	Nil
102	R-R	18/01/52	17/07/03	Yes	PicoPrep™ Capsules	Completed	Perianal burning, PR bleeding
103	YSA	26/07/50	17/07/03	Yes	Standard Glycoprep™	Completed	Cramps, bloating
104	T-D	08/08/46	22/07/03	Yes	Standard PicoPrep™	Completed	PR bleeding
105	KCF	26/04/75	24/07/03	Yes	Standard PicoPrep™	Completed	Diarrhoea, rectal bleeding
106	S-V	19/03/64	06/08/03	Yes	Standard Glycoprep™	Completed	PR bleeding
107	T-C	25/01/44	06/08/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Nil
108	F-L	23/05/42	07/08/03	Yes	Standard Glycoprep™	Completed	Flatulence
109	M-T	30/04/44	07/08/03	Yes	Standard PicoPrep™	Completed	Nil
110	R-G	23/08/53	12/08/03	Yes	PicoPrep™ Capsules	Completed	Abdominal pain
111	BRH	03/09/63	14/08/03	Yes	PicoPrep™ Capsules	Completed	Nil
112	G-C	02/03/63	14/08/03	Yes	Standard PicoPrep™	Completed	Ongoing fissure
113	R-S	26/09/71	14/08/03	Yes	Standard Glycoprep™	Completed	Nil
114	KGT	28/05/76	15/08/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Diarrhoea
115	N-L	22/05/45	18/08/03	Yes	Standard Glycoprep™	Completed	PR bleeding
116	A-P	07/07/77	18/08/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Constipated
117	B-D	31/10/56	18/08/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Bloating, burping
118	JEP	12/02/38	11/09/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Diarrhoea
119	R-W	11/01/61	11/09/03	Yes	Standard Glycoprep™	Completed	Nil
120	BAW	31/01/60	12/09/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	PR bleeding

Patient Number	Initials	Date Of Birth	Consent	Enrolled	Arm	Completion Status	Baseline Symptoms
121	MAM	30/04/70	12/09/03	Yes	Standard Glycoprep™	Delayed Exclusion	Constipated
122	SGD	22/01/56	17/09/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	PR bleeding
123	DKH	28/07/76	17/09/03	Yes	Standard Glycoprep™	Completed	Abdominal pain, diarrhoea
124	M-A	05/01/59	17/09/03	Yes	PicoPrep™ Capsules	Completed	Abdominal pain
125	G-W	04/10/45	17/09/03	Yes	PicoPrep™ Capsules	Completed	Nil
126	AMM	19/12/62	17/09/03	Yes	PicoPrep™ Capsules	Completed	PR bleeding
127	SJE	27/04/54	19/09/03	Yes	Standard Glycoprep™	Completed	PR bleeding
128	ADW	03/10/56	13/10/03	Yes	PicoPrep™ Capsules	Completed	PR bleeding
129	P-H	10/06/58	16/10/03	Yes	PicoPrep™ Capsules	Completed	Indigestion
130	J-S	31/07/81	31/10/03	Yes	Standard PicoPrep™	Completed	Nil
131	F-T	01/01/63	06/11/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Nil
132	KHL	24/12/44	07/11/03	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Nil
133	JCE	28/03/57	19/01/04	Yes	Standard PicoPrep™	Completed	PR bleeding
134	M-M	20/09/38	19/01/04	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Nil
135	PEB	30/04/56	20/01/04	Yes	PicoPrep™ Capsules	Completed	Nil
136	FAW	25/07/54	06/02/04	Yes	Standard Glycoprep™	Completed	PR bleeding
137	RSM	29/01/72	06/02/04	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Nil
138	GMC	25/07/44	06/02/04	Yes	PicoPrep™ Capsules	Withdrawn	Nil
139	AEN	22/04/42	09/02/04	Yes	PicoPrep™ Capsules	Completed	Nil
140	RCW	02/01/52	12/02/04	Yes	Standard PicoPrep™	Completed	Nil
141	C-W	14/04/60	12/02/04	Yes	Standard PicoPrep™	Completed	Bleeding, constipated, bloating
142	G-F	30/03/43	12/02/04	Yes	Standard PicoPrep™	Completed	Nil

Patient Number	Initials	Date Of Birth	Consent	Enrolled	Arm	Completion Status	Baseline Symptoms
143	MFB	14/09/70	19/02/04	Yes	Standard PicoPrep™	Completed	Bleeding
144	M-V	21/08/67	19/02/04	Yes	PicoPrep™ Capsules	Completed	Nil
145	B-W	06/03/52	19/02/04	Yes	Standard PicoPrep™	Completed	Nil
146	JAK	28/03/84	20/02/04	Yes	Standard Glycoprep™	Completed	Nil
147	P-F	02/04/67	20/02/04	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Nil
148	SJW	23/04/71	05/03/04	Yes	Standard Glycoprep™	Completed	Diarrhoea, cramping
149	D-C	26/05/67	11/03/04	Yes	Standard PicoPrep™	Completed	PR bleeding, diarrhoea
150	G-C	05/11/47	11/03/04	Yes	PicoPrep™ Capsules	Completed	Nil
151	S-A	06/12/72	12/03/04	Yes	Standard Glycoprep™	Completed	Abdominal pain, flatulence
152	PGB	10/03/52	15/03/04	Yes	Standard PicoPrep™	Completed	Nil
153	AMG	05/11/35	19/03/04	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	PR bleeding, diarrhoea
154	P-Q	13/06/49	19/03/04	Yes	Standard PicoPrep™	Completed	Nil
155	M-R	04/12/62	26/03/04	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Nil
156	RST	14/03/50	29/03/04	Yes	PicoPrep™ Capsules	Completed	Nil
157	C-A	16/12/74	31/03/04	Yes	Standard Glycoprep™	Completed	Nil
158	EWP	08/10/52	07/04/04	Yes	PicoPrep™ Capsules	Completed	Nil
159	D-B	10/04/46	08/04/04	Yes	Hypertonic Solution and PicoPrep™ Capsules	Completed	Nil
160	A-G	01/02/61	14/04/04	Yes	Standard Glycoprep™	Withdrawn	Nil
161	GRN	21/08/49	19/04/04	Yes	Standard Glycoprep™	Completed	Nil
162	M-A	11/05/59	30/04/04	Yes	PicoPrep™ Capsules	Completed	Constipation

12.2 Study Information

12.2.1 HREC Involved in the Approval of the Study

Centre for Digestive Diseases Human Research Ethics Committee
144 Great North Road
Five Dock, NSW, 2046

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12.2.2 List of Investigators and Other Study Staff (CV's included on following pages)

CV - Thomas Borody

Thomas Julius Borody	MD, MBBS, FRACP, FACG, FACP

Address (Name of Institution, Street, City, State or Province, Postal Code, Country)

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+ 61 2 9713 4011	+ 61 2 9713 1026

Education and Training (List all Colleges, Universities and Medical Schools attended through postdoctoral/fellowship training, including board certification/medical license)

Name and Location of Institution (State or Province and Country)	Degree and Year Awarded
American College of Physicians (Philadelphia, USA)	FACP 2002
American College of Physicians (Philadelphia, USA)	FACG 1993
University of NSW (NSW, Australia)	MD 1984
Royal Australasian College of Physicians (NSW, Australia)	FRACP 1982
University of New South Wales (NSW, Australia)	MBBS 1974
New South Wales Medical Board (NSW, Australia)	Current New South Wales Registration, Australia Registration Number: MPO: 013614 First Registered 1975
University of New South Wales (NSW, Australia)	BSc (Med) Hons 1971

Professional Experience

Position/Title	Name and Location of Institution (State or Province and Country)	Dates
Director and Gastroenterologist	Centre for Digestive Diseases (NSW, Australia)	1985 to Current
Consulting Gastroenterologist	Sydney Adventist Hospital (NSW, Australia)	1995 to Current

CV – Antony Wettstein

Antony Robert Wettstein	MBBS(Hons), FRACP

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+ 61 2 9713 4011	+ 61 2 9713 1026

Education and Training (List all Colleges, Universities and Medical Schools attended through postdoctoral/fellowship training, including board certification/medical license)

Name and Location of Institution (State or Province and Country)	Degree and Year Awarded
Royal Australasian College of Physicians (NSW, Australia)	FRACP 1995
University of New South Wales (NSW, Australia)	MBBS 1990
University of New South Wales (NSW, Australia)	Bachelor of Surgery
New South Wales Medical Board (NSW, Australia)	Current New South Wales Registration, Australia Registration Number: MPO: 276951 First Registered 1991

Professional Experience

Position/Title	Name and Location of Institution (State or Province and Country)	Dates
Consulting Gastroenterologist	Centre for Digestive Diseases (NSW, Australia)	2000 to Current
Consulting Gastroenterologist	Diagnostic Endoscopy Centre St Vincent's Clinic, (NSW, Australia)	2000 to Current
Locum VMO Gastroenterologist	St Vincent's Public Hospital (NSW, Australia)	2002 to Current

CV – Sanjay Ramrakha

Sanjay Chand Ramrakha	MBBS, FRACGP, FACEM

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Education and Training (List all Colleges, Universities and Medical Schools attended through postdoctoral/fellowship training, including board certification/medical license)

Name and Location of Institution (State or Province and Country)	Degree and Year Awarded
Australian College of Emergency Medicine (NSW, Australia)	FACEM 1999
Royal Australasian College of Physicians (NSW, Australia)	FRACGP 1998
University of New South Wales (NSW, Australia)	MBBS 1987
New South Wales Medical Board (NSW, Australia)	Current New South Wales Registration, Australia Registration Number: MPO: 226951 First Registered 1988

Professional Experience

Position/Title	Name and Location of Institution (State or Province and Country)	Dates
Sedationist	Centre for Digestive Diseases (NSW, Australia)	1999 to Current
Staff Specialist – Emergency Dept	Royal Prince Alfred Hospital (NSW, Australia)	1999 to Current
Staff Specialist – Emergency Dept	Liverpool Hospital (NSW, Australia)	2005 to Current

CV – John Saxon

John Anthony Saxon	MBBS, FRACP, FACEM

Address (Name of Institution, Street, City, State or Province, Postal Code, Country)

Centre for Digestive Diseases 144 Great North Road, Five Dock, NSW, 2046 Australia

Telephone Number (Country Code, Area Code, Number)	**FAX Number** (Country Code, Area Code, Number)
+ 61 2 9713 4011	+ 61 2 9713 1026

Education and Training (List all Colleges, Universities and Medical Schools attended through postdoctoral/fellowship training, including board certification/medical license)

Name and Location of Institution (State or Province and Country)	Degree and Year Awarded
Australian College of Emergency Medicine (NSW, Australia)	1998
Royal Australasian College of Physicians (NSW, Australia)	FRACP 1987
University of New South Wales (NSW, Australia)	MBBS 1984
New South Wales Medical Board (NSW, Australia)	Current New South Wales Registration, Australia Registration Number: MPO: 208195 First Registered 1985

Professional Experience

Position/Title	Name and Location of Institution (State or Province and Country)	Dates
Sedationist	Centre for Digestive Diseases (NSW, Australia)	1995 to Current
Sedationist	Rosemount Endoscopy Centre (NSW, Australia)	2000 to Current
Chief Medical Officer	Sydney Turf Club and Australian Jockey Club (NSW, Australia)	1999 to Current

Calculation of amount of sodium salt and sugar in the compositions of Kawakami

a. Sodium salt

The composition described in Kawakami is a 900 mL solution that includes 4.8-5.4 mM sodium chloride, 8.5-9.3 mM potassium hydrate and 10.7-2.1 grams sugar. Sodium chloride has a molecular weight of 58.45 (The Merck Index, 9th ed. (1976), entry **8343**, page 1111). Thus, the amount of sodium chloride in the composition described in Kawakami ranges from about 0.25-0.29 grams, as shown below.

58.45 g/L, = 1 M ∴ 0.05845g/L = 1 mM

The composition contains 900 mL of 4.8-5.4 mM NaCl. Therefore, the composition contains:

4.8 x 0.05845 g/L = 0.28 g/L; 900 mL of this solution contains 0.25g NaCl.

5.4 x 0.05845 g/L = 0.32 g/L; 900 mL of this solution contains 0.29 g NaCl.

b. Sugar

The composition of Kawakami contains 2.1 to 10.7 grams of sugar. Hence, the ratio of sugar to sodium salt in the compositions described in Kawakami range from about 7.3 times the weight of the sodium salt (2.1g sugar/0.29 g NaCl) to about 42.8 times the weight of the sodium salt (10.7 g sugar/0.25 g NaCl).

THE MERCK INDEX

AN ENCYCLOPEDIA OF
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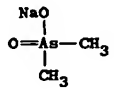
yields Cadet's liquid, contg mostly dimethylarsine oxide. This is oxidized with mercuric oxide yielding crystals of cacodylic acid which is neutralized with Na_2CO_3 or NaOH: Cadet de Gassicourt, *Mem. savants étrangers* **3**, 633 (1760); Valeur, Gaillot, *Compt. Rend.* **185**, 956 (1927).



Trihydrate, crystals, granules. Slight odor. Liquefies in its water of hydration at about 60°. Becomes anhydr at 120°. Burns with a bluish flame, emitting a garlic-like odor. One gram dissolves in 0.5 ml water, 2.5 ml alcohol. pH about 8-9. *Keep well closed.* LD_{50} s.c. in mice: 1.25 g/kg.

Human Toxicity: More toxic by mouth than by injection due to rapid release of inorganic arsenic by gastric acid. Large doses may cause nephritis, albuminuria, hematuria: *Martindale The Extra Pharmacopoeia*, N. W. Blacow, Ed. (Hazell, Watson & Viney, Aylesbury, Bucks, 1972) p 219.

USE: Herbicide.

THERAP CAT: Has been used in chronic skin diseases, leukemia.

THERAP CAT (VET): Has been used in chronic eczema, anemia, as a tonic.

8340. Sodium Carbonate. CNa_2O_3; mol wt 106.00. C 11.33%, Na 43.39%, O 45.29%. Na_2CO_3. Occurs in nature as the hydrate, *thermonatrite*, and the decahydrate, *natron* or *natrite*. Produced by the ammonia-soda or Solvay process, or from lake brines or sea water by electrolytic processes: *Faith, Keyes, & Clark's Industrial Chemicals* (John Wiley, New York, 4th ed., 1975) pp 706-715. *Reviews:* Bailey in *Mellor's* vol II, suppl II, *The Alkali Metals* (part 1), 1058-1205 (1961).

Anhydr, *Solvay soda.* The technical grade (about 99% pure) is known as *soda ash.* Odorless, hygroscopic powder; alkaline taste; d 2.53; mp 851°, but begins to lose CO_2 even at 400°. On exposure to air it will gradually absorb one mol water—about 15%. Sol in 3.5 parts water at room temp, 2.2 parts water at 35°, in glycerol; insol in alcohol. Dec by acids with effervescence. Combines with water with evolution of heat. Its aq soln is strongly alkaline. pH 11.6. *Keep well closed.*

Monohydrate, odorless, small crystals or cryst powder; alkaline taste. Stable at ordinary temps and atmospheric conditions; dries out somewhat in warm, dry air or above 50°; becomes anhydr at 100°. d 2.25; also reported as 1.55. Sol in 3 parts water, 1.8 parts boiling water, 7 parts glycerol; insol in alcohol.

Decahydrate, *Nevite, Soda.* The technical product is known as *sal soda* or *washing soda.* Transparent crystals; readily effloresces on exposure to air. d 1.46. mp 34°. Sol in 2 parts cold, 0.25 part boiling water, in glycerol; insol in alcohol. The aq soln is strongly alkaline to litmus. *Keep well closed and in a cool place.*

Human Toxicity: Sensitivity reactions may occur from repeated topical use. Ingestion of large quantities may produce corrosion of G.I. tract, vomiting, diarrhea, circulatory collapse, death. Concd solns in contact with skin or eyes may cause local necrosis.

USE: In manuf of Na salts, glass, soap; for washing wool; textiles, etc.; in bleaching linen, cotton; general cleanser; in water-softening; in photography; as reagent in analytical chemistry.

THERAP CAT: Pharmaceutic aid (alkalizing agent).

THERAP CAT (VET): Has been used as an emetic. In solution to cleanse skin, in eczema, to soften scabs of ringworm.

8341. Sodium Carboxymethyl Cellulose. CMC; sodium cellulose glycolate; carboxymethyl cellulose sodium; Cel-O-Brandt; Cethylose; Glykocellon; Carbose D; Thylose; Xylo-Mucine; Tylose MGA; Cellolax; Polycell. R_nOCH_2COONa. Prepd by treating alkali cellulose with sodium chloroacetate. Review and bibliograhy: Ott, *Cellulose and Cellulose Derivatives*, New York, 1946 (2nd ed., 1955).

White granules. Soly in water depends on degree of substitution. Water-soluble CMC is available in various viscosities (5-2000 centipoises in 1% soln), and the soly is equally good in hot and cold water (difference from methyl cellulose). Also the presence of metal salts has little effect on the viscosity. Solns are stable between pH 2 and 10. Below pH 2 precipitation of a solid occurs, above pH 10 the viscosity decreases rapidly. K of the free acid is 5×10^{-5}. The free acid is obtained from aq soln at pH 2.5 and may be precipitated with alcohol.

USE: In drilling muds, in detergents as a soil-suspending agent, in resin emulsion paints, adhesives, printing inks, textile sizes, as protective colloid in general. In pharmacy for preparing suspensions.

THERAP CAT: Cathartic; antacid.

8342. Sodium Chlorate. $ClNaO_3$; mol wt 106.45. Cl 33.31%, Na 21.60%, O 45.09%. $NaClO_3$. The chlorate of commerce is about 99% pure. Produced from sodium chloride by electrolysis: *Faith, Keyes, & Clark's Industrial Chemicals* (John Wiley, New York, 4th ed., 1975) pp 716-721.

Colorless, odorless crystals or white granules. d 2.5. mp 248°; at about 300° liberates oxygen; entirely dec at higher temp. Sol in about 1 ml cold, 0.5 ml boiling water, about 130 ml alcohol, about 50 ml boiling alcohol, 4 ml glycerol. Sodium chloride diminishes its soly in water. The aq soln is neutral. *Keep out of contact with organic matter or other oxidizable substances.* LD orally in rats: 12,000 mg/kg, *Handbook of Toxicology* vol. 1, W. S. Spector, Ed. (Saunders, Philadelphia, 1956) pp 270-271.

USE: An oxidizer, like potassium chlorate, in manuf of dyes; explosives and matches; dyeing and printing fabrics; tanning and finishing leather; as weed killer.

THERAP CAT: Pharmaceutic aid (oxidizing agent).

8343. Sodium Chloride. Salt; common salt. ClNa; mol wt 58.45. Cl 60.66%, Na 39.34%. NaCl. The article of commerce is also known as *table salt, rock salt* or *sea salt.* Occurs in nature as the mineral *halite.* Produced by mining (rock salt), by evaporation of brine from underground salt deposits and from sea water by solar evaporation: *Faith, Keyes, & Clark's Industrial Chemicals* (Wiley, New York, 4th ed., 1975) pp 722-730. Comprehensive monograph: D. W. Kaufmann, *Sodium Chloride*, ACS Monograph Series no. 145 (Reinhold, New York, 1960) 743 pp.

Cubic, white crystals, granules, or powder; colorless and transparent or translucent when in large crystals. d 2.17. The salt of commerce usually contains some calcium and magnesium chlorides which absorb moisture and make it cake. mp 804° and begins to volatilize at a little above this temp. One gram dissolves in 2.8 ml water at 25°, in 2.6 ml boiling water, in 10 ml glycerol; very slightly sol in alcohol. Its soly in water is decreased by HCl and it is almost insol in concd HCl. Its aq soln is neutral. pH: 6.7-7.3. d of satd aq soln at 25° is 1.202. A 23% aq soln of sodium chloride freezes at −20.5°C (5°F). LD_{50} orally in rats: 3.75 g/kg, Boyd, Shanas, *Arch. Int. Pharmacodyn. Ther.* **144**, 86 (1963).

Note: Blusalt, a brand of sodium chloride contg trace amounts of cobalt, iodine, iron, copper, manganese, zinc is used in farm animals.

Human Toxicity: Not generally considered poisonous. Accidental substitution of NaCl for lactose in baby formulas has caused fatal poisoning.

USE: Natural salt is the source of chlorine and of sodium as well as of all, or practically all, their compds, e.g., hydrochloric acid, chlorates, sodium carbonate, hydroxide, etc.; for preserving foods; manuf soap, dyes—to salt them out; in freezing mixtures; for dyeing and printing fabrics, glazing pottery, curing hides; metallurgy of tin and other metals.

THERAP CAT: Electrolyte replenisher, emetic; topical anti-inflammatory.

THERAP CAT (VET): Essential nutrient factor. May be given orally as emetic, stomachic, laxative or to stimulate thirst (prevention of calculi). Intravenously as isotonic solution to raise blood volume, to combat dehydration. Locally as wound irrigant, rectal douche.

8344. Sodium Chlorite. $ClNaO_2$; mol wt 90.45. Cl 39.20%, Na 25.42%, O 35.38%. $NaClO_2$. Prepd on a commercial scale by passing chlorine dioxide into a soln of sodium hydroxide contg carbonaceous matter and lime: Vincent, U.S. pats. 2,092,944/5 (1937 to Mathieson). Review of

Sodium Picosulfate/Magnesium Citrate: A Review of its Use as a Colorectal Cleanser.

Adis Drug Evaluation
Drugs. 69(1):123-136, January 01, 2009.
Hoy, Sheridan M.; Scott, Lesley J.; Wagstaff, Antona J.

Abstract:
Oral sodium picosulfate/magnesium citrate (CitraFleet(R); Picolax(R)), consisting of sodium picosulfate (a stimulant laxative) and magnesium citrate (an osmotic laxative), is approved for use in adults (CitraFleet(R); Picolax(R)) and/or adolescents and children (Picolax(R)) as a colorectal cleansing agent prior to any diagnostic procedure (e.g. colonoscopy or x-ray examination) requiring a clean bowel and/or surgery. It is dispensed in powder form (sodium picosulfate 0.01 g, magnesium oxide 3.5 g, citric acid 12.0 g per sachet), with the magnesium oxide and citric acid components forming magnesium citrate when the powder is dissolved in water.

In adult patients, two sachets of sodium picosulfate/magnesium citrate was at least as effective and well tolerated as oral magnesium citrate 17.7 or 35.4 g, or oral polyethylene glycol 236 g in adult patients undergoing a double-contrast barium enema procedure in three large, randomized, comparative clinical studies. In contrast, sodium picosulfate/magnesium citrate was less effective than a sodium phosphate enema preparation in two studies in patients undergoing flexible sigmoidoscopy. A similar number of patients receiving two sachets of sodium picosulfate/magnesium citrate or two 45 mL doses of oral sodium phosphate the day before a double-contrast barium enema procedure achieved satisfactory barium coating and none/minimal faecal residue in one study. However, the data from three of these studies should be interpreted with caution because the administrative regimens used differed from that recommended. Sodium picosulfate/magnesium citrate is also an effective and generally well tolerated colorectal cleansing agent in children and adolescents; the preparation was more effective than oral bisacodyl 0.01 or 0.02 g plus a sodium phosphate enema preparation in this population. Further research is thus required to accurately position sodium picosulfate/magnesium citrate and fully establish its efficacy and tolerability prior to various exploratory or surgical procedures. Nevertheless, oral sodium picosulfate/magnesium citrate provides a useful option in the preparation of the colon and rectum in adults, adolescents and children undergoing any diagnostic procedure (e.g. colonoscopy or x-ray examination) requiring a clean bowel and/or surgery.

Pharmacological Properties: Oral sodium picosulfate/magnesium citrate acts locally in the colon as both a stimulant laxative, by increasing the frequency and the force of peristalsis (sodium picosulfate component), and an osmotic laxative, by retaining fluids in the colon (magnesium citrate component), to clear the colon and rectum of faecal contents. It is not absorbed in any detectable quantities. Sodium picosulfate is a prodrug: it is hydrolyzed by bacteria in the colon to the active metabolite 4,4'-dihydroxydiphenyl-(2-pyridyl)methane.

Sodium picosulfate/magnesium citrate may be associated with a dehydrating effect, as evidenced by a reduction in bodyweight and increased haemoglobin levels; some at-risk patients may experience postural hypotension and older patients may require additional electrolytes.

Clinical Efficacy: In three large (n >100), randomized, single-blind clinical studies, two sachets of oral sodium picosulfate/magnesium citrate was at least as effective as oral magnesium citrate 17.7 or 35.4 g, or oral polyethylene glycol 236 g as a colorectal cleansing agent in adult patients undergoing a double-contrast barium enema procedure. In contrast, sodium picosulfate/magnesium citrate was less effective than a sodium phosphate enema preparation in two studies in patients undergoing flexible sigmoidoscopy. A similar number of patients receiving two sachets of sodium picosulfate/magnesium citrate or two 45 mL doses of oral sodium phosphate the day before a double-contrast barium enema procedure achieved satisfactory barium coating and none/minimal faecal residue in one study. However, the data from three of these studies should be interpreted with caution because the administrative regimens used differed from that recommended.

In children and adolescents, sodium picosulfate/magnesium citrate was significantly more effective as a colorectal cleansing agent than oral bisacodyl 0.01 or 0.02 g plus a sodium phosphate enema preparation in a randomized, single-blind study; dosages were adjusted for age in this study.

Tolerability: Oral sodium picosulfate/magnesium citrate is generally well tolerated in adult patients undergoing various investigational colorectal procedures. Adverse events were generally mild to moderate in intensity and mainly gastrointestinal in nature (e.g. abdominal cramps/pain, nausea); other common treatment-emergent adverse events included disturbance of daily activity, headache and sleep disturbance. This combination is at least as well tolerated as oral sodium phosphate or oral polyethylene glycol, with moderate/severe nausea and vomiting occurring less frequently in sodium picosulfate/magnesium citrate recipients than in those receiving oral sodium phosphate, and abdominal bloating/pain and nausea developing less often with sodium picosulfate/magnesium citrate than polyethylene glycol therapy.

The incidence of abdominal pain and sleep disturbance in sodium picosulfate/magnesium citrate versus oral magnesium citrate recipients was similar in one study, but significantly lower with sodium picosulfate/magnesium citrate in another. While the incidence of most adverse events was similar in recipients of sodium picosulfate/magnesium citrate and a sodium phosphate enema preparation, more patients receiving sodium picosulfate/magnesium citrate reported moderate/severe flatulence, incontinence and sleep disturbance, and more patients receiving the enema preparation reported rectal soreness. The tolerability profile of sodium picosulfate/magnesium citrate in patients aged >70 years is reportedly similar to that in patients aged <70 years.

Abdominal pain also occurred less frequently with sodium picosulfate/magnesium citrate than with oral bisacodyl plus a sodium phosphate enema preparation in children and adolescents.